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THE TRADE CYCLE

THE TRADE CYCLE

An account of the causes producing
rhythmical changes in the activity
of business

BY

F. LAVINGTON, M.A.

Girdler's Lecturer in the University of Cambridge
Author of The English Capital Market



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PREFACE

THIS brief account of the trade cycle is intended to be a statement in as simple a form as possible of the main causes which underlie the rhythmical variations in the activity of business. It is not the result of original research, but is based mainly on the views of a comparatively small group of economists whose interpretations of the very complicated phenomena of cyclical fluctuations seem to me to be most acceptable. Most of the leading ideas have been drawn from the writings of Dr. Marshall, Professor Pigou, Mr. D. H. Robertson, and from the great work on *Business Cycles* by Professor W. C. Mitchell of California. The facts and the subsidiary argument have come from a wider range of sources, including the writings of Professor Mitchell and M. Aftalion, to whom inadequate acknowledgment is made in the text. I am much in debt to Mr. H. D. Henderson and other Cambridge friends for valuable criticism and suggestions.

F. L.

EMMANUEL COLLEGE,
CAMBRIDGE.

April, 1922.

CHAPTER I

INTRODUCTORY

THE late autumn of 1921 finds the greater part of the civilized world in an economic condition which, if it were not so tragic, might justly be described as absurd. In their situation as consumers the people of two continents stand in urgent need, in varying but more than common degree, not only of their customary comforts but even of their daily bread. Simultaneously, in their situation as producers they stand, again in varying but more than common degree, in most unwilling idleness. In the United Kingdom business men, in control of an ample industrial equipment substantially unimpaired by war, produce no more than one-third of the pig-iron, one-half of the steel, and perhaps two-thirds of the cotton goods of pre-war days; while work-people in numbers unapproached in the thirty years' records of the Board of Trade remain restless in unwilling unemployment. And by reason simply of their own inactivity, they are visited by present privation and threatened by a slow deterioration of the industrial capacity on which depends their future well-being.

When ample resources vainly seek employment,

and urgent wants vainly seek satisfaction, the impediments must be very powerful which prevent the adjustment of the one to the other. It might reasonably be expected that impediments so powerful as to prevent a well-equipped community from meeting its own pressing needs could not long conceal themselves even under the immense complexities of modern organization. When so many thousands of the ablest and best-informed men in the country, acting under the very strongest inducements, are trying to trace these difficulties to their source, it would seem inevitable that these sources should soon be exposed and eradicated. But the expectation is not fulfilled and seems hardly to be in prospect of complete fulfilment.

The principal impediments, we are told, are such causes as these : the great uncertainty of prices, in particular of the prices of foreign currencies, which makes almost impossible the intelligent business forecasts on which production is necessarily based ; the increased mutual mistrust between employers and work-people, which hampers wage settlements and cripples productive powers ; the high costs of production, which limit our ability to compete in foreign markets ; and these, it is said, are the consequences of war. These statements, no doubt, are true ; but they can hardly be a full explanation of our present condition. For these impediments were in operation two years ago, and at that time until the spring of 1920 business activity was very great, unemployment was exceptionally low, profits and wages were high, and our social condition

might fairly be described as one of tolerable prosperity. When the peculiar business circumstances due to the war are present in times both of extreme depression and moderate prosperity, they can hardly be held to be the cause of the one condition and not of the other; and they cannot explain the transition from a period of extreme activity to one of unexampled depression. Underlying the special difficulties inherited from the war, therefore, there must be at work other more obscure influences which are responsible for the transition. The history of a hundred years of alternate business activity and business depression suggests, and suggests very convincingly, that these influences are of a kind from which we have suffered many times before. It suggests that the main causes of our present condition are to be found, not in the outstanding events of the past seven years, but in the more normal operation of the influences which produce business cycles: that the condition itself is to be described as one of cyclical depression, complicated and strongly reinforced by the exceptional difficulties arising from war.

The great importance of these exceptional difficulties is admitted. But it is fully recognized in the torrent of writing on the financial menace of international debts, the state of the foreign exchanges, the vagaries of our currency, and the relations of employers and employed. And some special excuse is needed to add anything to the volume of that stream. Accordingly the discussion which follows concerns itself primarily

with none of these special difficulties. It deals mainly with causes which have been constantly in operation during a century of history ; its object is to distinguish, as clearly as may be, the influences which, many times in the past, have provoked these curious alternations of active and inactive business, and now, in the present, have brought us into a condition of depression without parallel in business memories.

CHAPTER II

THE NATURE OF THE PHENOMENA

It may be as well to begin with a statement of the nature of the phenomena for which an explanation needs to be found. Modern economic history of the great civilized States shows a strong growth in their productive power: a persistent upward movement in output per head and consequently in material well-being. That is as one would expect. But it shows also that the course of this growth has not been a straight line but a succession of waves; that there has been superimposed, as it were, on this persistent upward movement a series of periodical alternations of growing and declining activity. It is this rhythmical character which requires explanation.

These cyclical movements seem first to have shown themselves clearly during the transition to modern methods of production; in England, for example, the first clearly marked cycle was apparently that which produced a severe business depression shortly before the outbreak of the Napoleonic Wars. The date of their first appearance is significant when it is noticed that their course has been less strongly marked in France

than in industrial communities such as the United States, England and Germany; and when the further obvious fact is added that these effects are much more severely felt in the highly organized centres of commerce and industry than in the outlying regions of retail trade and agriculture. For these circumstances point clearly to the conclusion that the explanation of these rhythmical movements is to be found in the characteristics of modern industrial organization.

With the increasing business intimacy among nations these movements have ceased to take much account of political frontiers, they have spread rapidly from one country to another. It is true that, with the exception of the crisis of 1907, which extended over a large part of the world, the United States has frequently followed a course of its own. But the last three cycles which have afflicted Europe ran their course phase by phase, almost simultaneously in England, France and Germany. Measured from peak to peak their average time-length in Europe during the fifty years ending in 1908 has been about eight years. But their periodicity is irregular; one great movement, for example, extended from 1890 to 1900, while another was compressed into the period between 1900 and 1907. Whatever their periodicity they usually contain three clearly marked phases: first, a period of 'rising business activity extending (on the average of a half-century) over some four years; next, a brief interlude of apprehension whose intensity may attain to a panic;

and finally a period of declining business activity roughly equal to that of the rise.

Of the whole series of elementary economic changes which constitute the economic rhythm, the most conspicuous, and probably the most significant, is that of price. On the average of the last seven cycles in this country the general level of wholesale prices rose annually about 4 per cent. during the period of prosperity, and fell annually about 4 per cent. during the following period of depression. These annual variations may not seem impressive in comparison with those from which we have suffered in recent years ; but they are much greater and productive of far more social disturbance than those which arise from changes in the output of gold and are brought forward as evidence to condemn the gold standard. The cyclical movements of price are not, of course, limited to those of wholesale commodities ; business profits fluctuate in an even more extreme degree ; interest and discount rates follow the general movement ; and wage rates, moving within narrower limits, follow changes in wholesale prices with a " lag " of uncertain length.

Underlying these monetary phenomena and correlated with them, are cyclical movements in the volume of production. Information is scanty, but there are figures showing changes in the output of pig-iron and ships, in the volume of railway traffic and of foreign trade, and in the numbers of new joint stock companies registered. Statistics of this kind, together with evidence of a less definite

character, show clearly that the construction of capital goods expands and contracts in a marked degree during periods of prosperity and depression, and suggest that the output of goods in general also follows the rhythm of prices.

These periodic phenomena, as a cryptic writing to be deciphered, have an interest of their own; but their importance lies in the perturbations which they set up in the social life of the community. That marriage rates should conform to the general rhythm is perhaps of no great moment; that pauperism and criminality should similarly rise and fall is more significant; that between boom and depression the volume of unemployment should fluctuate 5 per cent. in general, and 10 per cent. in some of the constructional trades, is evidently of the very first social importance.

The one fact that these cyclical changes of business activity are probably the most important single cause of unemployment is in itself sufficient justification for inquiry into their nature. The further fact that, in spite of this well-recognized evil, their nature is still not fully understood, shows the great obscurity of their ultimate causes.

A true statement of these causes must be general enough to explain their universality. It must, it would seem, be based on the essential characteristics of modern industrial organization, for it is in modern industrial conditions that their influence is most conspicuous. It must explain the continuous rhythm of activity, apprehension, and depression, and explain it by reference to causes which

work themselves out, not with the rigid uniformity in the inanimate, but with varying intensity and of periods of irregular length. The nature of these conditions seems to make it improbable that any adequate solution is to be found in physical causes such as the rigidly determined movements of the heavenly bodies acting on the earth's natural yield. It suggests rather that the essential causes are to be found in the nature of man and of his instruments of production ; that they consist of some set of influences operating with cumulative effect to stimulate business activity until their artificial stimulus culminates in a condition of crisis, when their action is dissipated or reversed and there follows a period of quiescence during which they gather strength to initiate a new series of changes.

CHAPTER III

SOME ESSENTIAL CONDITIONS OF MODERN ORGANIZATION

IN modern communities the adjustment of economic means to economic ends is not undertaken by any supreme central authority. This complex task is assigned to a specialized class of many thousands of independent entrepreneurs, employers, or business men (whatever we choose to call them), each one of whom occupies himself with some small part of the whole vast enterprise. In the typical case, each of these entrepreneurs, acting on his own personal judgment and at his own risk, hires in the open market supplies of the labour, the capital, and the land which he requires, joins them together into a business undertaking, and produces goods designed to meet some particular and small part of the prospective needs of the community. This circumstance that the initiative in organizing productive resources and setting them in motion arises from a specialized group of individuals is so suggestive, and so obviously relevant to the problem of determining the source of these alterations of business activity, that it is clearly worth while to pursue the matter further with a view to

distinguishing more clearly the nature of the entrepreneur and the conditions on which he works.

In modern times the entrepreneur assumes many forms. He may be a private business man, a partnership, a joint stock company, a co-operative society, a municipality or similar body. The particular form he assumes is not indeed a matter of indifference ; for the growth of the public joint stock company, by making the supply of capital dependent on the changing mood of the investor and speculator, adds its own special contribution to the complexities of business cycles. But these differences need not concern us here. The entrepreneur may be described in terms of the function he performs ; he is the party who undertakes the responsibilities and the organization of production. Every one who undertakes this work is an entrepreneur , no one is an entrepreneur who does not do so.

It may be objected that this definition does not distinguish between the manufacturer, the merchant and the retailer ; for the responsibilities of setting resources in motion evidently fall on the manufacturer when he makes for stock, mainly on the merchant when he gives out contracts at his own risk, and largely on the retailer when he gives orders for goods required in the following season. It is undoubtedly true that this essential part of the entrepreneur's work—the assumption of the responsibilities of production—is often divided among several parties ; it is so divided in the textile trades.

It is also true that the responsibility is frequently found in single hands ; this is so when a company produces gas and supplies it direct to consumers, when a boot manufacturer sells his products in his own shops, or when an engineering firm markets its own machines. This responsibility must always be borne by one or more of the entrepreneurs in the chain of business operations which extends from the soil to the consumer. But while the question whether it is borne separately by the manufacturer, merchant, or retailer, or is divided among them, is not a matter of very great significance for present purposes, it is important to bear in mind that current business activity depends as much upon the merchant's will to buy as upon the manufacturer's willingness to produce. It will be sufficiently accurate to mean by the term entrepreneur those business men in each chain of operations who undertake the responsibility of initiating and organizing production ; though, for convenient definiteness of thought, the term will usually refer to the manufacturer or merchant in whom these services are most conspicuously present.

This reference to the responsibilities of undertaking production points to one of the fundamental conditions in which the entrepreneur does his work : the condition that production takes time ; that resources must be set in motion in anticipation of demand ; that production must be based not on facts but on forecasts ; finally, that the activity of business depends not on current conditions, but on the estimates which entrepreneurs form of the

conditions of their markets at some distant date in the future.

This consideration is evidently a very important condition affecting the activity of resources devoted to meeting demands for consumable goods. The wholesale clothier must prepare his patterns and, later, give his orders for cloth six months or more before he delivers the goods to meet the demand which he hopes will accompany the coming season. And the consideration is of greater importance still in those industries which make constructional goods; for here the market is still more distant, the forecast of its conditions more conjectural, and the possibilities of error greater. The iron and steel works must be active before the shipbuilding yards can begin to construct vessels in anticipation of freight conditions twelve months ahead; bricks must be made, ore must be extracted and its iron founded and converted into machines before new factories can be constructed to meet a distant and conjectural demand for their products. It is upon the entrepreneurs controlling these successive operations that responsibility rests. The more distant the prospective demand, the more elaborate the preparations required, and, it may be added, the more imperfect their knowledge of the operations of their competitors, the greater evidently are their risks and the wider are the possible errors in their forecasts. That this fundamental condition of modern production—its dependence on estimates of market conditions in the distant future—is an important influence in the phenomena of business

cycles, is shown clearly enough by the fact that the constructional industries of iron and steel manufacture, building, shipbuilding, and engineering are those which show in the most extreme degree these alternations of activity and depression.

From the circumstance that production is organized by independent entrepreneurs, each occupying himself with some specialized part of the total output, arises another condition of fundamental importance in the genesis of business cycles. For when each producing group under the command of an entrepreneur specializes in the production of a narrow range of commodities, each must sell its products for those of other groups ; in other words, the ability of each to market its own products depends on the output by other groups of the goods with which these products are bought ; its own activity is dependent on the activity of all others.

This mutual dependence among business firms is more intimate and far-reaching than is apparent without some reflection. It is almost literally true that each producing group constituting an industry forms a market for the products, not only of associated industries, but of every other industry in the country. For in general the capitalists, entrepreneurs, and work-people who form that group are a fair sample of the whole community in its aspect as consumer, and therefore purchase, with the proceeds of their own activities, a fraction of the output of all other industries. The producing group engaged in coal-mining may expend their consuming power predominantly on food, clothing, steel, timber, and

transport services, and their growing activity will affect predominantly the industries concerned with the production of those goods; but there is surely hardly any commodity produced within the country, with the possible exception of some coal substitutes, on which some part of their consuming power is not expended.

In order to come a little closer to the facts on which this general statement rests, consider the position of any representative entrepreneur in a time of marked depression such as the present. The producing group under his command is working at low pressure because it has no reasonable expectation that if it produces more it will be able to sell the additional output. If it is asked why this additional output cannot be sold, the answer is that consumers will not buy it. And if the further question is asked (as it should be asked) why consumers will not buy, the answer is because they are not able to—*because they themselves are not producing.*

In a problem of the kind we are considering, therefore, the party known as the "consumer" hardly possesses any independent existence. His proper name is "other producers." In so far as concerns his *will* to buy he is a real person, but in so far as concerns his *power* to buy he is only an aspect in which other producers are seen. His power to act as a consumer is derived from his own activity as producer, whether as capitalist, entrepreneur, or workman. That being so, the original question may be answered very simply.

In a time of general depression the individual firm is working at low pressure because other firms are working at low pressure. Each is inactive because the general power to consume has fallen ; and the general power to consume has fallen because of and in proportion to the general decline in the activity of production. The inactivity of all is the cause of the inactivity of each. No entrepreneur can safely expand his output until other entrepreneurs expand their output ; or more exactly and more significantly, no entrepreneur can safely expand his output until he has a reasonable expectation that others will be more active at the time when his additional output is ready for the market. The matter may be left for the moment at this point. The manner in which this condition of interdependence gives scope for a cumulative increase in business activity is more conveniently considered a little later in conjunction with corresponding changes in the level of business confidence.

The fact that economic means are adjusted to economic ends by independent entrepreneurs operating at their own risk carries with it another condition of not less importance than that which has just been indicated. If the sense of practical possibilities is abandoned and it is supposed that production could be organized by some supreme economic control, it may be assumed that such a body would be guided by a simple policy ; it would adjust the productive resources at its disposal simply and directly to the estimated needs of the community. In a régime of independent entre-

preneurs this unified, intelligent control disappears and there is interposed between activities and needs the regulative agency of price.

The price index for any commodity in its one aspect expresses the *effective* market demand arising from the needs of consumers ; in its other aspect it operates with its appropriate force as an incentive to entrepreneurs, drawing into this particular employment the quantity of resources requisite to satisfy the demand. If this effective demand rises or falls (and if this is the sole change taking place) the price index also rises or falls and the consequent change in the profitableness of supplying this market causes an expansion or contraction in the volume of productive resources devoted to the satisfaction of this particular need. Similarly, a rise or fall in the expenses of producing the commodity, acting again through changes in prices and profitableness, operates as in the interests of economy it should operate ; it contracts output and consumption when the social need can be satisfied only at greater cost per unit than before ; or expands output and consumption when the social need can be met at a smaller cost.

In the immensely complex organization of a modern community the co-ordination of supply and demand—in other words, the distribution of productive resources among their various employments—is effected by the price index with a delicacy and intelligence which no single mind could rival, always provided that movements of price originate in such sources as those which have just been indicated—

changes in the volume and urgency of needs or in the efficiency of the productive resources by means of which they are satisfied. It is quite another matter when price movements originate in such sources as variations in the output of gold, the issue of excessive quantities of paper money or undue expansions or contractions in bank loans. In such circumstances as these changes in the price index still exert their influence on the actions of entrepreneurs and, through them, on the distribution of resources. But the movements of the index have lost their intelligence ; they arise from arbitrary and irrelevant causes ; and their effect is not to co-ordinate, but rather to disturb the existing co-ordination of supply and demand.

It will be argued later that arbitrary causes of this kind, at one time persistently raising prices, at another time persistently depressing them, are in operation during the course of business cycles and constitute one of the influences which contribute most powerfully to their intensity. At the moment, all we need to note is the trite conclusion that when entrepreneurs are considering the degree of activity they should impart to the resources under their control, they have in mind, not the future needs of the community but the prospective prices in those markets in which they may require to buy their materials or dispose of their products.

Among the characteristic features of modern organization are then these four : first, that the responsibility for production is assumed by a special class of business men, each acting on his own judg-

ment and at his own risk ; second, that, as production takes time, its present activity depends on estimates of future conditions, on forecasts liable to error ; third, that the market for the output of each firm is dependent on the output of all others ; finally, that as business estimates are based, not on prospective needs but on prospective prices, they are liable to further error from arbitrary variations in the price index. The question arises : Do these fundamental conditions indicate the direction in which investigation should proceed ? Do they suggest the source of these alternations of business activity known as business cycles ?

It seems that they do. They show that the entrepreneur stands at the centre of the economic organization, for under his control pass all the productive resources of the community. It is he who estimates future demands ; it is he who sets resources in motion now to meet those distant demands. If his forecast of future conditions is an optimistic one, the producing group which he controls is now active, and the market for the products of other groups is improved ; if his forecast is pessimistic, this producing group is now inactive, and the market of other producing groups is depressed. Whether business activity in the present is in a condition of boom or in a condition of depression depends, therefore, on the forecasts made by entrepreneurs of the future conditions of demand ; it depends, in a word, on their confidence in the business outlook. If general confidence is high, the whole economic organization is stirred into a condition of

extreme activity ; if general confidence is low, the whole organization sinks into a condition of stagnation. Is it not probable, therefore, that the key to the causes of business fluctuations lies in the mind of the entrepreneur, in the influences which determine his confidence in the business future ? It is this line of investigation which will be followed in the subsequent discussion. It will be argued that the nature of modern organization is such that it engenders influences which, acting on the anticipations of entrepreneurs, causes confidence, and with it business activity, to grow *cumulatively* ; that this progressive movement continues until a point is reached at which the exposure of errors in forecasts and other adverse conditions shake the confidence on which it is based and produce a condition of apprehension ; and that there follows a period in which the original influences are reversed, causing a *cumulative* decline of confidence and hence of the business activity dependent upon it.

CHAPTER IV

BUSINESS CONFIDENCE

THE argument of the preceding chapter was directed to show that the current activity of business depends on the estimates made by business men of future market conditions, and that these estimates in their turn are affected materially by the general state of confidence in the business outlook. That argument may be sufficient to explain why business is occasionally very active and occasionally very depressed ; but it does not explain the periodicity of activity and depression ; it does not show why business activity persistently increases until it attains a condition of boom and then persistently declines until it reaches a condition of marked depression. If this rhythmical movement is to be accounted for, further explanation is necessary. Such an explanation may be found if it can be shown : first, that there exist influences which, reacting upon and strengthening one another, cause a *cumulative* increase in business confidence and consequently in business activity ; and, secondly, that this growing activity ultimately destroys the confidence on which it is based, with the result that

the influences at work are reversed and there follows a *cumulative* decline in business confidence which leads to a condition of marked business depression.

The argument of this and the following chapter is concerned to show that in the characteristic conditions of modern organization, such influences do arise. The principal influence, it will be maintained, lies in the tendency of confidence to rise or fall cumulatively; partly as a result of simple contagion—of propagation by infection, as it were, from one entrepreneur to another; partly as a result of an inherent tendency to overestimate success or failure. This tendency is reinforced by the condition of interdependence among business firms, by the circumstance that the ability of each producing group to market its products rises and falls with the activity of all other groups by whom its products are consumed. It is reinforced further by the influence arising from changes in the volume of effective purchasing power which, by their action in raising or lowering the general level of prices, emphasize conditions of confidence or depression. These conditions or influences are not simple independent causes whose total effect is to be found by simple addition. Rising confidence increases the supply of effective purchasing power, and increased purchasing power by raising prices gives a further impulse to the growth of confidence. The three are mutually related. Each reinforces the others and is reinforced by them. The manner in which they work is indeed less simple than this. But it is not necessary to anticipate further. Their

nature and mode of operation are considered more fully in the following pages.

THE EXPANSION OF CONFIDENCE

If our resources were controlled by some supreme economic council, and if production and consumption were temporally so closely related as when a child is picking and eating blackberries, the fact that optimism and pessimism is contagious would have no particular economic significance. But, in actual life, when resources are controlled by entrepreneurs each acting on his own judgment and at his own risk, when production and consumption are separated by a considerable period of time, and when the activity of each entrepreneur is dependent on the activity of all others, the effect of this contagious influence on the adjustment of activities to needs becomes a matter of considerable importance.

The entrepreneur's estimate of future market conditions, on which depends the present activity of the resources he controls, is evidently determined by two kinds of condition. Its main basis is an independent rational judgment of the circumstances of the market in which he is primarily interested, the market in which he hopes to sell his goods. But this judgment is coloured by the business atmosphere in which it is formed. The outlook is a little rosier when other business men are cheerful, a little darker when others are depressed. A few days of inspiring weather may give a lift to Stock

Exchange quotations, though nothing has occurred which would modify a rational judgment of their prospective yield. And the strength with which this influence affects business judgments (partly through sympathetic excitement, partly through the reason) is evidently likely to be the greater, the more incalculable are the conditions on which the rational judgment is based. It is in the markets for speculative securities, whose yield is most uncertain, that the contagious influence of confidence is most clearly marked. To put the matter in a more general form : when the rational judgment is coloured by hope we have a condition of unduly high confidence, or optimism ; when the judgment is coloured by apprehension we have a condition of unduly low confidence, or pessimism ; and the more uncertain the basis on which the rational judgment rests the more susceptible will it be to the influence of hope or apprehension.

It seems clear, then, that the mere fact of one man being confident in the business outlook is a cause, and not wholly an irrational one, of some slight increase in confidence on the part of others with whom he comes into contact. The measure of cheerfulness which he imparts, reflected from one to another, may in favourable circumstances reinforce itself in much the same way as a rumour, even though it emanates from a single source, may gather confirmation and credibility by mere repetition as it passes to and fro among the dealers in a market.

When a small boy, heavy with parental warnings, approaches a pond on which people are skating,

his knowledge of the risks which he incurs by joining them is small. The rational judgment that the greater their numbers the greater will be his risk, is likely to be submerged by the mere contagion of confidence which persuades him that the greater their numbers the more safely he himself may venture. Indeed the confidence of each skater in his own safety is likely to be reinforced rather than diminished by the presence of numbers of his fellows. And when, in the order of nature, the sound of a crack is heard and confidence is transformed into apprehension, that apprehension, whose influence on a solitary skater might be small, being reflected from one to another, reinforces itself rapidly and cumulatively, and may, if its natural vent in action be impeded, rise to a panic in the general effort to escape.

So, too, in a period of boom, when the causes of business prosperity are imperfectly understood, companies may be floated, and business men may engage in ventures, whose prospective success is estimated less by a rational judgment of the facts than by confidence derived from the visible success of others. And when, in the natural order of events, the inherent weaknesses of the business situation are exposed and rational judgments become coloured not by confidence but by apprehension, that apprehension propagates itself cumulatively; and if the efforts of each to secure his financial position are impeded by a restrictive loan policy on the part of the banks, a condition of apprehension may rapidly rise to one of panic.

Further illustration is perhaps unnecessary—the more so because the argument has been concerned with nothing more than a special application of what is familiar in everyday life: contagiousness of mood, which makes two miserable men together more miserable than either separately, evidently works in a similar way on confidence, causing it to rise into optimism or sink into depression.

Everyday experience discloses another tendency for confidence to rise or fall in an exaggerated degree. The occasional impudences of the boy who has never felt the rod, the inclination of the successful speculator to take greater and greater chances, the growth of an extravagant German belief in German destinies after the triumphant campaign of fifty years ago: all these illustrate the tendency of confidence to outrun the teaching of experience, to expand in undue measure in response to success, to shrink in undue measure in the realization of failure.

The special application of this general tendency to the theory of business cycles may be illustrated by carrying a little further the argument of pages 22-4 and tracing the influence exerted by the mutual interdependence of business firms upon the rise of confidence in a period of growing prosperity.

Bearing in mind the fact that production takes time, and that the entrepreneurs in any industry consequently adjust their current activities mainly to future rather than present conditions, let us assume the occurrence of some favourable event such as a good Indian Monsoon. In the absence

of other strongly adverse conditions (an important proviso in present circumstances), the occurrence of this event, carrying with it the expectation of increased activity in the cotton trade, is a real cause for increased confidence on the part of entrepreneurs in all other industries. If conditions are definitely favourable, Manchester merchants may give speculative orders to spinners and manufacturers in anticipation of an expanded Calcutta demand. The slightly increased activity in the cotton trade, carrying with it greater present and prospective purchasing power on the part of the whole producing group, justifies increased confidence, and therefore increased present activity, on the part of all the industries on whose products, in greater or less degree, that purchasing power will be expended. Larger present and prospective orders from spinners and manufacturers will increase the activity of ocean and inland transport engaged in the carriage of cotton, of the dealers in the Liverpool market, of the engineering trades and dyeworks, and the multitude of minor auxiliary industries focussed on the cotton trades. At the same time, larger present and prospective consumption on the part of work-people quickens the confidence of local retailers, increases their re-stocking orders on merchants, and increases, through them, the orders on other manufacturers.

The influence which an expansion in the present and prospective consuming power of a single producing group exerts in this way on the activity of all other groups is important enough. But it

is not the whole of the matter: the impulse is cumulative. For the present and prospective activity of each one of the stimulated industries itself originates an impulse which is propagated in all directions in the same manner as the original stimulus imparted by the activity in the cotton trade. The increased confidence and increased activity on the part of business men in each trade is not only a cause but a justification of increased confidence and therefore of increased activity on the part of entrepreneurs in all other trades. If business judgments were purely rational, confidence in each trade would be a good reason for somewhat greater confidence in others; and the increased confidence in others would be a good reason for a slightly increased confidence in each; for every increase in the volume of production constitutes an increase in the power to consume.

But in such circumstances, as activity grows, business judgments will not remain purely rational. Apart from the fact that they will be coloured by the business atmosphere in which they are made, each must inevitably be further tinged with optimism by the growing realization of business success. At such times, some of the operations by which ship-owners add to their fleets and other business men call new factories into being, may be justified on grounds of commercial profit, if not of social interest; for the very high returns which their new capital equipment may earn for a year or two may fully offset the business losses incurred in the following period of stagnation; and each of these entrepreneurs will

realize that even if he refrains from participating in the general boom he will not thereby escape the consequences of the following general depression. But this is not the whole story. When markets are rapidly expanding and prices rising, the most inefficient entrepreneurs find business easy and profitable ; rationally based confidence gives way to optimism—judgments are infected by a general error ; many businesses are extravagantly managed, many ventures are undertaken with no reasonable prospect of success ; and causes are set in motion whose effects, in the form of realized business error, destroy the confidence from which they arise and bring the period of prosperity to an end.

CHAPTER V

BUSINESS CONFIDENCE (*Contd.*)

THE INFLUENCE OF PRICE

IN the previous chapter we were concerned with the manner in which the interdependence of business firms encouraged the tendency of the general level of confidence to rise into optimism or sink into pessimism, carrying with it corresponding changes in the general activity of business. The mode of operation of these influences was considered without reference to price ; it was indeed discussed on the implicit assumption that the price level remained constant. That being so, it seems clear enough that these influences proceed from sources independent of the price level and that they would be likely to produce cycles of alternate activity and depression even in a society not based on a money economy. Whether or no they would in fact do so is a matter of no great interest to anyone but an academic student ; for modern communities do in fact employ a monetary system and their activities are regulated by the price index. It is of more significance that these influences proceed from an independent origin, for on this fact depends an understanding of their

relations to the price level. It was stated in a previous chapter that during the course of a trade cycle there came into operation causes which arbitrarily altered the general level of prices, and it was implied that these causes were no other than changes in the general level of confidence. It is our present business, therefore, to discuss the mutual relations between these changes and the price level : to show how rising confidence tends to raise the price level ; how declining confidence tends to lower it ; and how these changes in the level of prices, by their reaction on the level of confidence, reinforce the intensity of the whole cyclical movement.

Before approaching the main problem, a little must be said on the preliminary question : On what does the level of prices depend ? Suppose that, without any other change, there is created and added to every market in the Kingdom a man with £100 in his pocket. No one is likely to deny that as a result of the presence of one more buyer in each market the average level of prices throughout the markets will be a little higher than it would have been in his absence ; for the same quantity of goods is being offered against an increased quantity of money. Further, no one is likely to reject the inference that the same result would follow if the various sums of £100, instead of being deposited in the hands of additional individuals, are distributed among the parties originally forming the market, always supposing that there is no change in the willingness of those parties to employ the

cash resources at their disposal. If the notion of the "market" is extended to include all retail shops, the only difference is that the resulting change in price is more widespread. And if the notion is extended further to cover every purchase or sale, the same result follows: the increase in the amount of money available to purchase the same quantity of goods results in a lift to prices which is practically universal. Given then that, in the absence of any other change, an increase in the volume of money held by people throughout the country raises the general level of prices, it follows that a decrease in the quantity so held will lower prices. And if, instead of supposing the sole change to be an increase or decrease in the volume of money, we suppose the sole change to be an increase or decrease in the volume of goods offered against money, the two opposite propositions are equally valid. These considerations give us the fragment of monetary theory needed in the following argument: namely, that in the absence of other change, any increase in the volume of money offered against goods, or any decrease in the volume of goods offered against money, raises the general level of prices; and any decrease in the volume of money offered against goods, or any increase in the volume of goods offered against money, lowers that level. With that conclusion in hand we can pass on to consider the manner in which changes in the general level of confidence alter the general level of prices and how that alteration reacts upon the level of confidence.

When at the end of a period of depression, business men are recovering confidence; when they believe that the markets for which they work will soon be capable of carrying off increased quantities of their products, they are naturally inclined to expand their current output. If, as we may suppose, this inclination is both general and effective, there will evidently be an early increase in the aggregate quantity of goods offered against money; and this increase will tend directly to lower the general level of prices. But experience shows that such periods of increasing business activity are soon accompanied not by a fall but by a rise in general prices. In order to explain that fact, therefore, we need to show that the rise in business confidence which increases the output of goods, increases also the volume of money, and increases it in an even greater degree.

The term *money* is a vague one. Let us substitute for it the term *effective purchasing power*. The substitution enables us to deal in one phrase with changes in the *power to buy*, i.e., with changes in the volume of all the means of purchase at the disposal of the community, and with changes in the *will to buy*, i.e., with changes in the rapidity of circulation of these means of purchase, in the activity with which the community employs the means of purchase at its disposal. An increase in the volume of effective purchasing power includes therefore both increases in the means of purchase, in the widest sense of that term, and also increases in the intensiveness with which those means are

employed. Rising confidence affects many sources of supply of effective purchasing power. If it is to be shown that it increases this supply more powerfully than it increases the supply of goods, its influence must be examined in some detail.

In the first place, it seems clear enough that a greater measure of confidence in the outlook encourages the will to buy on the part of business men. Current-account balances, hitherto largely inactive, are more intensively used; they are transferred more rapidly from one account-holder to another in the form of cheques drawn for the purchase of materials and so on, a condition which is reflected in a rise in the Clearing House returns. Further, as the scope for the profitable employment of resources in business uses expands, there is inevitably an increased pressure on the banks for larger supplies of the money by means of which the more favourable opportunities may be exploited. And any consequent expansion in bank loans leads directly to a corresponding increase in the volume of current-account balances. That is not all. Greater confidence on the part of business men and of investors generally leads to the withdrawal of money hitherto stored away on deposit account, and this withdrawal results directly or indirectly in its transfer to current accounts, where it forms the basis of further cheque-making facilities. How important this effect may be is a matter of conjecture. That deposit accounts have expanded largely during the present business depression has been a matter of comment by City editors. That

they should contract as business becomes more active is a common-sense inference which cannot be resisted. One of the objects of lowering the bank rate, and with it deposit rates, is presumably to encourage this taking of money out of store and bringing it into active employment. If the recent fall of bank rate has its hoped-for effect, if it succeeds in quickening confidence, it can surely not fail to lead to considerable withdrawals from deposit account for direct business purchases or for subscription to the securities of public companies, whose expanded issues are so marked a feature of rising business activity. But whatever the relative importance of the three influences which have just been considered, it is abundantly clear that rising confidence leads to an increase in the volume of current-account balances and an increase in the activity with which they are employed. It leads therefore to a substantial increase in the volume of effective purchasing power in the form of cheques, the form in which perhaps three-quarters of the total payments of the country are effected.

Concurrently with this growth of cheque-making facilities there occurs another important but rather obscure expansion in purchasing power. Its mode of operation is perhaps most clearly seen in the circumstances of an organized raw-material market, one of the points most sensitive to changes in business activity. In such markets an improvement in the general business outlook, carrying with it the prospect of an increased demand for raw materials, is likely to lead to speculative bull

operations whose effect is to drive up the price of the commodity in anticipation of the coming expansion in the trade demand. That condition is familiar enough. The point of interest is the manner in which price is raised without the use of anything which would commonly be called money. Suppose that, in such circumstances, a speculative dealer on the Liverpool cotton market bought large quantities of "futures" and as a result drove up both future and spot prices. He would have produced that effect without the use of any money; for he does not buy his "futures" with cash; his present monetary liability amounts only to an undertaking to pay or receive periodically minor sums in cash in settlement of price differences occurring during the currency of his contracts. We have then this difficulty: the quantity of cotton offered against money is not less than before; the quantity of money offered against cotton is not greater than before; and yet prices have risen. How is this apparent contradiction of monetary theory to be explained? The most convenient way of looking at the matter seems to be this. The speculator might have bought his "futures" with bills of exchange. Had he done so, there would have been created a number of negotiable promises to pay which would commonly have been reckoned as an addition to the stock of currency, and the rise in price would have required no explanation. What he has actually done has been to buy his "futures" with implicit instead of explicit promises to pay. His operation involved in fact a creation of pro-

mises to pay which constituted an increase in the volume of effective purchasing power, and expressed itself, in the usual way, in a rise of price.

It is by no means an unimportant matter that a confident view of the future of business should lead speculators to create purchasing power and by its means drive up prices on the Stock and Produce Exchanges. Every business man knows to what extreme length prices in these markets may be carried upward under the influence of rising confidence and how suddenly and disastrously this movement may be reversed when confidence gives way to apprehension. But the importance of the matter becomes much greater when it is realized that the operation of this influence in the organized markets is only a special case of the operation of a general influence acting in a closely similar way throughout all trade and industry.

Just as the speculator proper buys "futures" in raw materials, so the merchant gives orders to manufacturers for goods to be made and delivered at a future date. Trade practice varies, but in general, neither speculator nor merchant needs to use any additional money during the course of the contract. In each case prices are driven upward by the increased pressure of demand; in each case demand is supported by the creation of implicit promises to pay—by a creation of new purchasing power on the part of the buyer. One has only to recall the conditions of the boom period which preceded the spring of 1920 to realize how immense may be the increase in the volume of

trade orders and how correspondingly immense is the volume of purchasing power created by merchants and other parties acting under the influence of rising confidence in the business outlook.

It will be objected that the creation of new purchasing power in this way is purely temporary and moreover that it is limited by the necessity on the part of buyers to obtain money to pay for the goods ordered when they are finally ready for delivery. Both objections are sound ; but they do not much affect the force of the conclusion.

It is true that each implicit promise to pay which accompanies an order for the future delivery of goods must be extinguished by a money payment when those goods are delivered. But during the currency of the contract it undoubtedly operates as an increase in effective purchasing power ; and as new promises are continuously being created, there results a net increase in purchasing power extending throughout the period of boom. The second objection also has its answer. The creation of promises to pay proceeds concurrently with, and is no doubt a part cause of, the expansion in current account balances already described. If the volume of purchasing power engendered by these balances remained unaltered, or if merchants and other parties expected it to remain unaltered, their creation of promises to pay would no doubt be severely limited. But the facts are otherwise ; they show that merchants of good credit, and indeed many others of less solid reputation, can and do greatly expand the volume of their orders without

any great fear that at the time of delivery they will be unable to obtain the money requisite for the payment of the unsold balance of their increased supplies of goods. It seems, therefore, to be a safe conclusion that the cyclical rise and fall in wholesale prices is strongly reinforced by a marked expansion and contraction in the volume of promises to pay created *ad hoc* by parties who order goods for delivery at a future date.

The purpose of this rather elaborate discussion has been to show that rising confidence, which increases the activity of business and with it the supply of goods, increases the supply of effective purchasing power in an even greater degree, and so causes the rise in prices which in fact occurs during periods of improving trade. Evidently the matter is not one which is susceptible of exact proof. But perhaps a sufficiently good case has been made out when it is shown how readily rising confidence produces a marked expansion in the volume of effective purchasing power generated by bank balances and promises to pay. A more complete answer would require us to consider the changes occurring simultaneously in the volume and activity of notes, subsidiary coinage, and other means of payment. But such a discussion would be tedious and would really add little to the force of the general argument.

One further point should, however, be noticed, although it is more closely relevant to a later stage of the discussion. Inasmuch as promises to pay are largely based on bank balances and bank balances

in their turn are based on legal-tender money, the movement of expansion is necessarily limited sooner or later by the supply of legal-tender money—whether gold or Treasury notes. The point is of importance because as the expansion proceeds, rising prices and rising wages lead to larger withdrawals of cash from the banks and consequently to a reduction in the reserves on which their deposits are based. In other words, a period of rising business activity and rising prices, by virtue of its effect in sapping the basis of bank reserves, contains within itself causes which must ultimately lead to a destruction of the confidence on which the whole upward movement is based.

Accepting the conclusion that rising confidence, by increasing the supply of purchasing power, causes a rise in the general level of prices, we may pass on to the further question: the manner in which this rise in the price level reacts on confidence and causes its growth to be cumulative. In order to do so we must return to consider the position of the entrepreneur, who, as the party initiating and controlling production, is the moving spirit in the whole great enterprise.

For present purposes the entrepreneur may conveniently be regarded as a middleman operating between two sets of prices; the one as it were behind him, the other in front. It is his business to buy supplies of materials and of the services of labour, capital, and land; to join these together into a finished product; and to derive a profit from the difference between the sum of these con-

stituent prices and the market price of the product. In the typical case he enters into a set of contracts by which his supplies are secured for periods of varying length at prices fixed in greater or less degree. He may hire his land at a fixed rental on long lease; he may obtain capital against mortgages, debentures, or preference shares at fixed rates for long periods; he will usually hire labour on short contracts at prices which are not easily or rapidly revised; and he will buy his materials ahead to meet requirements extending over varied lengths of time. All these contracts are expressed in terms of the pound sterling.

In these conditions, when the general level of prices begins to rise—or what is precisely the same thing, when the purchasing power of the pound sterling begins to fall—all these contracts are by that fact modified in his favour. For he has undertaken to make periodical payments in terms of a unit whose value is now falling. If all the parties in his producing group were to share alike in the effects of the change, rent, interest, and wages should all rise at the same time, though not in the same proportion, as the rise in price of his finished product. But in fact of course they do not so rise. Possibly they should not, for it is in many ways desirable that the risks arising from changing prices should be borne mainly by the entrepreneur. In any case their rise is delayed in greater or less degree because of the comparative fixity of the terms of the various contracts. And that being so, such parties as landlords, debenture

and preference shareholders suffer a loss in real income because the fixed payments they receive purchase less than before; while work-people, whose money earnings are increased by overtime and fuller employment, receive incomes whose average purchasing power is probably increased, but is not at first increased in proportion to their greater productivity.

As general prices rise, therefore, there sets in what is in effect a transfer of wealth to the entrepreneur from landlords, capitalists, wage-earners, and temporarily, perhaps, from the parties who supply him with his materials. And even though the prices of raw materials rise, as they are likely to do, further and more rapidly than the price of his finished product, a transfer of wealth will in general continue because of the very slow adjustment of the rates of wages, interest, and rent. In effect, therefore, rising prices confer a bounty on the entrepreneur. They increase the profitability of his current business and improve his estimates of future market conditions. In a word, they increase his confidence in the business outlook.

This then is the conclusion to which the present argument has led. We have assumed, without looking for a cause, that the pessimism accompanying a period of business depression has slowly evaporated and given way to a feeling of greater confidence in the business outlook. Rising confidence then increases the current output of goods, but soon increases in greater proportion the volume of effective purchasing power, and so gives a lift

to prices. Rising prices, by conferring a bounty on the entrepreneur, react upon and reinforce the rise in business confidence. In this way there is generated a powerful cumulative stimulus to trade activity. But within this movement are causes tending to destroy the confidence on which it is based; for, on the one hand, rising prices are sapping bank reserves and, on the other, the artificial profitableness of business and the excessive confidence accompanying it lead to errors in business forecasts which sooner or later must be exposed.

CHAPTER VI

THE COURSE OF A TRADE CYCLE

It has been the object of preceding chapters to examine the circumstances of modern industrial organization with a view to distinguishing the *conditions* which seem to be essential to the occurrence of rhythmical variations of business activity and the *causes* operating in these conditions which actually produce the rhythmical movement.

The important conditions, it would seem, are these: the organization of production by independent entrepreneurs, each acting in the light of his own judgment and on his own responsibility; the methods of modern production which necessitate the output of goods in anticipation of demand, and consequently the basing of business judgments on forecasts rather than facts; the mutual interdependence of business firms, which makes the market for the output of each dependent on the output of all others; and, finally, the regulation of the activity of each firm by a price index which may be falsified by arbitrary influences. The central cause, it is suggested, by which the whole immense organization is raised into a condition of extreme activity or reduced into one of extreme

depression, lies in the instability of the general level of business confidence ; in its tendency to rise cumulatively until it passes into unreasonable optimism, and to fall cumulatively until it passes into a corresponding error of pessimism. With these general conceptions in mind, we may pass on to consider the course of a trade cycle ; in particular of those phases of apprehension and declining confidence on which little or nothing has yet been said.

There is no point in a trade cycle which can properly be described as its beginning or its end ; each phase, as Professor Mitchell points out, is the logical consequence of the preceding phase ; it is no more to be regarded as a new set of causes than as a new set of effects. But as we must break into the circle at some point or other, we may conveniently do so, as before, at the end of a period of depression, and begin by considering the influence by which the condition is gradually changed to one of rising activity.

THE GROWTH OF PROSPERITY

In the search for a cause which would serve to rouse industry from its depression and quicken it into activity, it is natural to look for the occurrence of some favourable event such as a bountiful harvest or a promising invention ; for it is easy to see that such an occurrence would be likely to improve the outlook and increase the purchasing power of a particular producing group, and in favourable conditions might, in the manner described in pages 34-6, act through the interdependence of

business to raise the general level of confidence and with it the general level of business activity. There is indeed evidence showing that such a course of events does at times actually occur. Professor Pigou, in his *Economics of Welfare*, instances such an effect following on important inventions and cites authorities to show that there is a definite connection between good harvests in the United States and a following condition of general business prosperity. It may be that there is a rhythm in the earth's natural yield, arising perhaps from solar changes, which partly determines the course of business cycles ; but it cannot be said that the existence of such a rhythm is proved. In view of the irregular periodicity of business cycles, it seems more reasonable to regard good harvests as of the nature of accidents, delaying the coming of depression or hastening the coming of prosperity, but exerting no regular influence on the rhythm of general industrial activity.

The rejection of a physical basis of explanation would not leave us helpless. On the contrary, it would lead us to consider more freely an alternative explanation of Professor Mitchell's which is especially satisfying to the logical sense: the suggestion, namely, that the initial influences working towards growing business activity are to be found in the conditions developed during the previous phase of business depression.

As the period of dull business proceeds, it seems inevitable that the feeling of mistrust accompanying the time of strain by which it was precipitated

should grow faint ; that the minds of business men should be less occupied with the oppressive memories of the past and more concerned with the possibilities contained in the future. Their hopes will be fortified by the knowledge that no business depression has yet been everlasting ; their interests establish a predisposition to interpret favourably any sign of business revival ; in short, there is gradually prepared the psychological basis of a revival in confidence. The readiness of the soil for the seed is made abundantly clear by the eagerness to believe in an early trade revival which is apparent in the speeches of statesmen and business men alike on the present industrial situation.

Side by side with the gradual change in the outlook of business men there proceeds a readjustment of economic conditions. Firms which have been in difficulties are re-organized and again set upon their feet. The strain of financial difficulties leads to the introduction of many economies ; in particular there is a fall in wage rates, an improvement in workshop discipline enforced by the fear of unemployment, and with it a marked increase in the efficiency of labour. The pressure of overhead charges when plant is only partially employed makes manufacturers willing to undertake contracts at very low rates in order to spread those charges over a larger volume of output. Excessive stocks of goods are likely to have passed into the hands of consumers. The growth of bank-reserves and the fall in rates of interest hold out the promise of a future expansion of loans on favourable terms. Finally, and of

great importance, there is a slackening or even an end of the persistent fall in the level of wholesale prices.

In such circumstances as these, when wage and interest rates are exceptionally low ; when small margins of profit are beginning to appear again in many industries ; when business men, with a predisposition to believe, are feeling that the worst is passed and are looking out eagerly for signs of improving trade—there is no need to look for any accidentally favourable event to explain the small measure of expansion in the volume of business which experience shows to occur. And as this slight expansion faintly colours the business atmosphere, we may fairly expect it to be reinforced by an increase in the volume of repair work ; for railway companies, feeling that prices are about at their lowest, are likely to increase their orders on the rolling mills, and a great number of manufacturers, who have hitherto been reducing their expenditure to a minimum, will make greater demands upon the engineering trades in order to get their machinery and plant into a condition which will enable them to take advantage of better times. But the consequent expansion in the iron, steel, and engineering trades will not be limited to those industries. The growing purchasing power of these great producing groups, expended on an immense variety of other products, will improve in greater or less degree the business outlook of all other producers ; and the impulse will be transmitted from one producing group to another, giving rise at each stage in its

course to improving confidence in the future outlook and consequently to increased current output.

Soon after this process is initiated, the increasing activity of business and the rising level of confidence by which it is accompanied are likely to lead to an expansion in the volume of effective purchasing power; partly because people "turn over their money" more rapidly, partly in consequence of an increase in merchants' orders based on promises to pay, partly as a result of increased pressure on the banks to expand their loans and so provide the means of purchasing the increased supplies of materials requisite for expanding production. And in consequence the level of prices begins to rise.

The same influences may be regarded in other aspects of their operation. The increasing output of each producing group, by expanding the purchasing power of that group, increases the *power* to buy of the whole community and therefore the effective demand for goods in general. At the same time the rising level of confidence, reinforced by the rising level of prices, increases the willingness of retailers, merchants, and manufacturers in each chain of operations, to undertake on an increasing scale the responsibilities involved in producing goods in anticipation of demand: in other words, it increases their *will* to buy and raises still further the pressure of demand upon existing industrial equipment. For when once it is believed that prices have entered upon their upward phase, no one can afford to wait, and every addition to the volume of buying, by its

effect on prices, tends to justify the anticipations on which it was based.

The complex influences which have now been set in motion had their origin, it was supposed, in a very gradual recovery in the volume of production occurring in conditions favourable to the growth of confidence. Such an expansion of output acts, as was argued in pages 34-6, as a cumulative stimulus to industry ; for its initial impulse is multiplied in the course of its passage to and fro among the producing groups forming the industrial system. But it seems very doubtful whether this initial impulse, *taken by itself*, could lead to any extreme expansion in general business activity. As the question is very material to the formation of a true theory of business cycles, it is perhaps permissible to speculate upon it to the length of a paragraph.

Supposing then that there were discovered a modern industrial community in which business judgments were always rationally determined, in which there was consequently no tendency for confidence to pass into errors of optimism or pessimism : would it be also free from any strongly marked industrial rhythm ? The answer would seem to be in the affirmative. In such a community fortuitous influences would no doubt be continually at work, at one time stimulating a particular industry into great activity ; at another or at the same time throwing some other industry into a condition of marked slackness. And in each case the impulse generated in the original industry would be propagated throughout the entire system, its total strength

growing as it spread. Even when it is granted that fortuitous impulses working in opposite senses would tend to destroy one another, it still looks as though a favourable occurrence, such as an important invention, might give rise to a condition of marked general business activity similar to that of the upward phase of a business cycle. No doubt, if the originating cause is an extraordinarily powerful one, some such result would follow ; inference from the recent period of war shows it to be likely. But when we are taking account only of such disturbing influences as those to which a community is ordinarily exposed, further consideration makes it appear improbable that they would produce anything in the nature of a boom. The favourable impulse arising from the invention, over-riding any adverse influences, would no doubt produce a cumulative growth in business activity. But so long as the original assumption held good ; so long, that is, as business forecasts continued to be based on rational judgments, there seems good reason to suppose that the increase in general business activity would not go far. Its growth would be confined by the limits of reasonable anticipation and there would not occur that optimistic estimation of the prospective yield on new capital goods which causes extreme activity in the constructional trades. The impulse would be cumulative in its effects, but the nature of its growth, surely, would be that of a convergent series, increasing in strength indefinitely, but increasing only up to a finite limit ; and that limit would be not far from a normal level of business activity. This general

reasoning is supported by such laboratory experiments, as it were, with which the operation of the industrial system provides us. For the professional speculator, acting in the light of reasoned expectations of the future conditions of demand and supply, has a steadying influence on the course of a great Produce market ; and everyone will agree that the recent boom and depression in Cardiff shipping would not have gone to such extreme lengths if its incidents had been governed only by the judgments of seasoned shipowners. If now we remove the original supposition and take account of the instability of the level of confidence, the condition is radically changed. The cumulative growth in business activity, so far from being confined by the limits which rational business judgments would impose on current operations, is reinforced by a rising error of optimism and takes the form of a divergent series multiplying itself without limit, or, at any rate, without any other limits than it itself generates in its upward course.

This reasoning is definitely speculative ; its use can be justified only by the great obscurity of the many influences working within the business cycle. It has, however, this in its favour, that it leads to the conclusion which is apparently accepted by such economists as Dr. Marshall and Professor Pigou the conclusion, namely, that the active principle animating business cycles is to be found in changes in the general level of business confidence.

After this digression, we may return to the main argument. The originating influence, the growth

of production, by expanding the power to buy, acts and continues to act as a real cause of increased business confidence. This influence is reinforced as a result of the stimulus imparted to the growing confidence of each entrepreneur by his recognition of his increasing business success and by contagion from the general business atmosphere. Rising general confidence, once established, sets in motion two trains of influences which react upon one another and upon their original cause. On the one hand, by increasing the willingness to assume the responsibilities of producing in anticipation of demand, it increases the current volume of output and consequently the general power to buy. On the other hand, by increasing the volume of effective purchasing power, it reinforces the rising tide of demand and emphasizes the rapidly growing profitableness of business. It is risky to speak with any assurance of the priority in operation of these various impulses, and impossible with our present power of language to trace clearly their complex mutual reactions ; but it is clear that we have here a set of influences which operates cumulatively on the growth of confidence and inevitably cause business judgments to become increasingly coloured by an error of optimism. It is only reasonable to anticipate that a cumulative upward movement of this nature will produce conditions in which the confidence on which it is based cannot be sustained. These various conditions must now be considered.

We may begin by indicating the influence of rising business activity on the growth of capital

construction. The high profits yielded by industrial plant under the growing pressure of demand give rise to extravagant estimates of the prospective yield on new undertakings ; there is consequently a heavy investment in new equipment and an extreme activity in the constructional trades which cannot be continued indefinitely. It is true that, owing to the already expanded productive capacity of many industries and the special difficulties of new construction, this particular effect was practically confined to shipbuilding during the boom of 1919-20. But there is good evidence for the belief that a rapid growth in industrial plant is one of the most conspicuous and important features of more ordinary boom periods. A part of the evidence for this belief is the great activity in the constructional trades and the rapid increase in the number of new joint stock companies, which are known to occur at such times.

The familiar facts with regard to this increase in the flotation of new joint stock companies illustrate another significant feature of periods of boom ; for it is well known that, as a result of the extravagant promises of promoters and the excessive confidence of investors, many of the new companies coming into being have no reasonable prospect of success. And it is a fair inference, which is supported by other facts, that throughout trade and industry generally many businesses are wastefully managed and enter upon operations whose success depends upon a continuance of rising prices or other exceptionally favourable conditions. A special in-

stance of such operations are those of the speculator in the Produce markets, who buys at high prices in the expectation that prices will rise higher still.

The error of optimism, which is unduly expanding the capital equipment of many industries and persuading business men to venture upon unusually risky operations, necessarily affects also the financial arrangements which form the duplicate of all business operations. It leads, that is to say, to an expansion in that particular form of confidence known as credit—the effective belief in the business trustworthiness and ability of other parties. It is difficult to ascertain whether or no there occurs a general increase in the volume of trade credits in that full sense of the term in which it implies a loan of capital in some form or other from one business man to another. But it is abundantly clear that there is a great expansion in the volume of outstanding contracts and a considerable increase in bank loans: that there is, in other words, a very great expansion in mutual commitments carrying with them an ultimate obligation to pay.

The existence of this increased volume of commitments is not perhaps in itself of any great importance; what is significant is the fact that its growth is bound up with two other developments, each one of which threatens its destruction. It is bound up, first, with a corresponding growth in the volume of purchasing power, which raises prices and by so doing initiates a withdrawal of legal tender from the central reserves and consequently a contraction

in the volume of bank loans. In the second place, its growth is bound up with, and dependent upon, the development of an exceptional degree of mutual confidence among business men, so that the existence of the increased volume of commitments can be sustained only so long as business men continue to trust one another in an unusual degree. Any shock to confidence, by lessening this mutual trust, acts as an astringent, causing a violent contraction in the fine threads of which the network of credit is composed.

We may notice a final point—one probably of minor importance. Professor Mitchell shows that during periods of rising business activity profits increase more rapidly than wholesale prices; more rapidly, therefore, than any other of the social indices which have been considered. He shows further that during the course of the upward movement there is a gradual encroachment on profits by rising expenses of production; in particular as a result of the very great increase in the prices of raw materials, the rise in interest rates, and a growth in wage rates accompanied by a decline in the average efficiency of labour. Inasmuch as profits form the immediate impulse to business activity, their decline must tend to check the rate at which that activity grows. And in so far as encroaching costs may destroy the profits of firms whose industrial situation is unfavourable, their influence may in some measure contribute to the termination of the boom.

During the upward phase of a business cycle we have, then, a development of these conditions: a

marked extension of capital plant whose completion and entrance into operation are likely to result in the exposure of error in some of the business forecasts which called it into being ; the employment of resources in exceptionally risky ventures whose success depends upon the continuance of unusually favourable conditions ; an expansion of credit, leading on the one hand to a great increase in business commitments based on a precarious extension of confidence, and on the other to a drain upon banking reserves ; and finally an encroachment of costs upon the margin of business profits. We have now to consider whether these conditions, generated during the phase of rising confidence and rising activity, are adequate to explain the transition to the following phase of apprehension and declining trade.

CHAPTER VII

THE COURSE OF A TRADE CYCLE (*Contd.*)

THE PERIOD OF APPREHENSION

THE interlude which separates the culmination of activity from the following period of depression is conveniently described as a condition of apprehension, for at least that measure of alarm seems always to accompany transition from the one phase to the other. The degree of apprehension may be moderate, as it was in this country in the spring of 1920 ; more commonly it amounts to crisis ; occasionally, when banking organization or policy is defective, it may rise to a panic, as it did in some earlier English cycles, and in the United States in 1907. A little must be said later with regard to the influence of banking policy in allaying or accentuating a condition of apprehension ; but before that is done an attempt must be made to bring out more clearly the nature of the maladjustments which occur during boom periods and the real causes which bring such periods to an end.

Consider first the influences arising from the monetary system. It has been shown that during periods of rising activity, the excessive expansion of effective purchasing power falsifies the price

index ; that the rise in prices, by giving as it were a bounty to entrepreneurs, unduly stimulates business enterprise and so contributes its part to the ultimate maladjustment of social resources to social needs. It is clear enough that the rising-price level which produces this artificial stimulus contains the seeds of its own destruction, for it inevitably leads to a drain on the supplies of legal tender money which directly or indirectly form the basis of bank loans and the cheque currency.

That self-destructive principle would evidently be ineffective if, as the banks' reserves were depleted by the withdrawal of money into circulation, they were replenished by the continuous manufacture of new legal tender money. If, therefore, in the course of the period of increasing business activity which must eventually come to us, the Treasury withdrew the limitation they have placed on the supply of Treasury notes and issued new supplies as they were required, activity might ripen into boom and the boom in all its extravagance might continue, not indefinitely but for a long time, without any limitation being imposed upon it by the operation of the monetary system.

In actual fact, of course, the supply of legal tender is usually limited. In pre-war days in this country it was limited by the available quantity of gold ; in post-war days it is limited by the restriction upon the fiduciary issue of Treasury notes. If, therefore, the Treasury are able to maintain their limitation, in the face of the pressure of business demands and the great difficulties of

Government finance, the course of any future boom will be terminated, as in the past, by the semi-automatic operation of the monetary system. Bankers, partly realizing, partly anticipating the drain on their reserves, will limit or contract their loans ; and the consequent cessation of the expansion of purchasing power will remove the artificial stimulus to business and bring the boom to an end. In early 1920, one of the main influences ending the business boom in the United States seems to have been the reaction of the banking system to the continued heavy demands for capital arising partly from farmers, as a result of falling produce prices, and partly from exporters who needed to support the heavy commercial credits they had granted to Europe.

These considerations show that in a country with a modern monetary system in normal operation a cyclical condition of extreme business activity engenders financial causes which inevitably bring about its termination. But as, in the opinion of economists, the influence of the monetary system is to be regarded not as the primary, but as a reinforcing cause of business cycles, this explanation may not in itself be an adequate one. Its inadequacy need not drive us to consider all the influences, inherent or fortuitous, which may end a period of boom ; but it does require us to make an attempt to answer a narrower question : Does the phase of marked business activity engender any real, as distinct from monetary, cause which prevents its own continuance indefinitely ?

Here again we must enter a region of imperfect knowledge where reasoning can only be speculative ; and we must enter it, not in the expectation of finding proofs, but in the hope of finding at least an explanation which conforms with general principles and harmonizes the more important of the data. Of the available data perhaps the most significant are those relating to the behaviour of the constructional trades, which give effect to home investment : first the fact of their great activity during the upward phase of the cycle ; second, the probability that the period of construction and time of completion of the bulk of the new capital equipment correspond fairly closely with the length of that phase and the date of its termination ; finally, the certainty that these trades are abnormally inactive during the following period of depression. An examination of these data in the light of general principles may yield an explanation of the termination of boom.

It is clearly possible that the rate of home investment may be so great that it is beyond the power of the community to maintain it ; and that by reason merely of the inadequate supply of new savings there must come a check to the growth of new equipment which, by slowing down the constructional trades, would undermine general business activity. Mr. Robertson indeed gives evidence suggesting that such an influence has been at work in some though not all cycles. It is as well, therefore, to bear this possible solution in mind, though in the following pages the main burden of explana-

tion is laid on somewhat different considerations.

Every business man recognizes that an increase in the supply of any commodity, such as rubber, can find a market only by pressing its way into uses in which the need for it is less urgent—only therefore by way of a fall in price corresponding to its lower value in these new employments ; always provided that there does not occur at the same time an increase in the volume of the uses in which the commodity can be effectively employed. Similarly, economists recognize that the additional supplies of new capital resulting from saving can find a market only by pressing their way into uses where their yield is lower—only therefore by a fall in the rate of interest corresponding to that decline in yield ; again provided that there is not at the same time a growth in inventions, in the development of new countries, in the demands of war or other employments for capital which may enable the new supplies to be absorbed without any such decline in rate. In pre-war days, it is estimated, the people of this country used to save about one-sixth of their aggregate income : in other words, they directed about one-sixth of our total productive capacity to the construction of new capital equipment at home, or to the production of goods destined for investment abroad. This immense annual volume of new savings was smoothly and continuously absorbed. When, as in this century, new saving was growing less rapidly than the volume of new uses for capital, the additional supplies were marketed at rising rates of interest ; when, as in the period

preceding 1896, opposite conditions held, the additional supplies were marketed at declining rates.

These considerations are set out at some length in order to establish as firmly as may be two conclusions. The first is this: that although there is a recondite sense in which there can be an "excess of savings," there cannot be such an excess in the sense that new supplies of capital are not marketable; history and common sense alike show that indefinite quantities of new capital can be absorbed and can be made to yield a return, though possibly of smaller amount than before. For this and other reasons, no explanation of the termination of boom is looked for on that line of inquiry. A more promising opening is to be found in the second conclusion: namely, that unless there is at least a proportionate growth in the volume of new uses for capital, *any additional supply, whether in the world as a whole, in the home market of this country, or in a particular industry, must press its way into uses in which it yields a lower return than before.* This conclusion must now be applied to the phenomena of business cycles.

We know that during the upward phase of the cycle, under the influence of optimistic expectations on the part of business men, company promoters, and investors alike, there is an unusually large investment of capital in the home market. Further, we may reasonably assume that the new capital is not pressed equally strongly throughout the whole field of home investment: i.e., that there is no great increase in its flow into such uses as

agriculture, road-making, education, and so on ; but that it is forced predominantly into the construction of new capital equipment for those industries which are for the time being exceptionally busy and exceptionally profitable. May we then not assume that the *actual realized yield* on the new supplies of capital generally, and especially the *actual realized yield* on the new supplies in the particular industries in question, must be lower than before, and very much lower than the extravagant anticipations of those who called the new capital equipment into being ? We may, at any rate, accept this inference as a working hypothesis and consider how far its likely consequences would conform to actual facts.

If the inference were sound, it would mean that the time at which the great bulk of the new capital equipment came into operation would be one in which there ripened a wide recognition of frustrated expectations ; for as the greatly expanded productive capacity made itself felt in the markets and so realized by business men, estimates of prospective profits must inevitably be adjusted to much lower levels. The development of this condition is evidently in harmony with the view already quoted that the period of gestation of the mass of new capital equipment corresponds with the period of rising activity : that the coming into being of the new plant and machinery corresponds with the end of the boom. Consider now the consequences which follow from this condition.

In the first place, the recognition of the low

prospective yield on existing capital can hardly fail to check the demand for further new equipment and, by so doing, to slow down the constructional trades and set in operation an influence tending to depress business generally. That such a check actually occurs is shown by the falling off in orders for new ships, machinery, and so on, which seems usually to precede a crisis, and by the later stagnation of the industries producing such capital goods.

Secondly, the condition must inevitably lessen confidence in the future outlook of business, and do so the more strongly the greater is the gap between past expectations and present prospects. Such a change in outlook must lessen current business activity, thereby reinforcing the depression spreading from the constructional trades ; and further must cause merchants and manufacturers to look with some apprehension on the financial situation of their fellows and on the extended volume of their own outstanding commitments. Such phenomena are those commonly observed at the close of a business boom.

Finally, the condition is not one in which there is realized a general uniform fall in prospective profits. It is almost certainly marked by the exposure of business errors due to a disproportionate volume of investment in particular industries. In so far as undue optimism has given rise to such errors the situation is aggravated, and confidence further shaken, by the prospective financial difficulties of particular individual firms. The influence of optimistic expectations in encouraging over-

investment in individual industries is shown clearly enough in the rapid multiplication of cotton spindles about 1907 and in the more recent history of the rubber-producing industry.

This correspondence between the known phenomena of business cycles and the logical consequences of the inference which was drawn from general principles, seems to give a fair probability to the truth of the following conclusion : that under the influence of optimism there occurs in the home market generally, and in particular industries specially, an investment of capital whose realized yield cannot attain the level of expectation ; that realization of this condition depresses the constructional trades, lessens confidence generally, and greatly weakens the financial position of individual firms ; and that these adverse influences, reinforcing one another, constitute a *real*, as distinct from a financial, cause which is sufficient to terminate a period of boom.

Of the many points of criticism which may be raised against this explanation a very brief answer may be given to one : the objection that the explanation assumes that there occurs no increase in the demand for capital sufficient to prevent its realized from falling below its anticipated yield.

It may perhaps be assumed that during the relatively short period of exceptional investment in the home market there is not likely to be so considerable an increase in inventions and so on as would increase the volume of uses in which capital might be employed so effectively as to maintain its yield ; but it

must be admitted that at such times the field for the profitable employment of capital is increased by the increase in the work done by business men and by labour. For theory and common sense alike make it clear that every increase in the amount and efficiency of the work done by business men and work-people tends to raise the yield on the capital which they use.

The answer to the difficulty seems to be this : that, for the reason given, capital can be employed to yield a higher return than hitherto during the early stages of a period of rising activity ; but that this condition is temporary ; for as the boom proceeds, the quality of business management and the efficiency of labour decline while their earnings rise, with the result that increasing costs, coupled with the increasing supplies of equipment, make it impossible for capital to continue to earn a high return, and cause its realized yield to fall far short of the expectations of those who brought the new capital equipment into being. It does not seem possible to make this answer logically complete in any short space ; but the drift of its argument may be clearer if it is expressed in technical terms, in this way. During the earlier phase of rising activity, business ability and labour, being more fully employed, increase their output and consequently their contribution to the National Dividend, thereby increasing the demand for capital and raising its yield. But as the boom proceeds, their declining efficiency reduces their output at the same time that their rising earnings increase the amount they draw from the

National Dividend ; with the result that the rate earned by capital declines and its growing supplies obtain a lower return than was anticipated.

It is only to be expected that the upward phase of each business cycle should have its own special character. Changes in banking policy, in methods of trade, and in the organization of production combine with the effects of accidental circumstances to modify the form of its development and strew its course with distinctive incidents. Nevertheless, it seems to be true that each such phase generates influences which bring about its own termination and that the most important of these inherent influences are the two whose nature has been briefly described : the one rising from the operation of the monetary system, the other from the circumstances determining the investment of capital. These influences produce conditions which are typical of the end of the period of extreme activity ; their further evolution must now be considered.

The central feature of the situation at this period seems to be the growing realization by the business community of errors committed and being committed. As new supplies of capital equipment come into action, business men in many industries must begin to doubt the capacity of markets to carry off the additional supplies at current prices ; they must reduce the estimates of their prospective profits ; and this decline in their prospects must lessen the confidence of bankers and other business men in their financial stability. Similarly, as the banks become aware of the dangers accompanying

the expanded volume of their loans, an expectation of more stringent monetary conditions can hardly fail to make the business community recognize more clearly the existence of a good deal of speculative trading based on rising prices, and compel them to regard with some apprehension the exceptional volume of their own outstanding commitments. As these unfavourable changes in the industrial and financial outlook are more clearly realized, failing confidence ripens into apprehension, and there comes into being a two-fold train of effects which reinforce one another and the condition from which they arise.

On the one hand, as the confidence of entrepreneurs in the future state of their markets is shaken, an unwillingness to assume the risks of producing in anticipation of demand shows itself in a falling off in merchants' orders and especially in the orders for new plant to meet the most distant needs. And, on the other hand, in consequence of the decline in the exceptional degree of confidence on which the extended credit relations are based, there is a desire on the part of each business man to "take in sail" and strengthen his position before the financial weather gets worse. As the dangers of the situation consist simply in liabilities to pay, they give rise naturally enough to an exceptionally large and urgent need for means of payment; to a great increase in the demand for money, partly to meet current payments, but mainly, it may be assumed, as a reserve against contingencies only imperfectly foreseen. This increased demand expresses itself partly in the form of

a growing pressure to sell, partly as a more urgent need for bank loans. The principal organized markets, being the points at which changes in supply and demand are most freely and clearly expressed, will indicate on a magnified scale the effect throughout the whole commercial system of an increased willingness to sell and a diminished willingness to buy. If their power to resist heavy selling pressure is weakened by the existence of large speculative holdings based on borrowed money, prices may fall rapidly to levels which threaten the solvency of important firms and quicken general apprehension. If, as in this country in 1907, a period of strain had been long foreseen and speculative commitments consequently restricted, liquidation in the great markets and throughout the business community generally may proceed without disaster. But it can do so, clearly, only if the organization, the reputation, and the tradition of the banks enable them, as by far the most important group to creditors, to follow a unified liberal policy designed to relieve the condition of strain.

In 1907, as is well known, the then defective organization of the United States banking system and the failure of public confidence in particular banking firms led to a widespread restriction of cash payments and a premium on currency, which, by depriving the business community of the increased supplies of money required to sustain confidence in the power to meet payments, precipitated a condition of crisis into one of panic. In this country we were more fortunate. A centralized system, com-

posed of banks of very high reputation and influenced by a tradition ripened by long experience, made possible a policy which assured to solvent firms the means of meeting their engagements. It thereby allayed the growth of mutual mistrust and with it the violent contraction of credit (and therefore of new business contracts) in which that mistrust expresses itself. Crisis passed indeed into marked depression ; but by the end of 1909 business conditions were again in the phase of rising prosperity.

CHAPTER VIII

THE COURSE OF A TRADE CYCLE (*Contd.*)

THE GROWTH OF DEPRESSION

WE have now some sort of explanation of the manner in which the phase of depression, under the influence of favourable conditions generated by itself, gives way to a period of rising confidence ; how confidence, by a process of cumulative growth, rises into optimism ; and how optimism, as a result of the business errors to which it gives rise, is precipitated into apprehension. The argument has still to travel through the remaining arc of the circle : the phase in which apprehension passes into growing depression.

The condition of acute apprehension, marked especially by mutual mistrust, by a consequent desire to contract outstanding commitments, and hence by a keen demand for money, is not likely to last for more than a few months. As the facts are faced and liquidation proceeds, the strain gradually lessens. But the condition has been one in which faith in the prospects of business has been shaken, and there have been set in motion influences, partly " real," partly monetary, which show themselves in a cumulative decline in confidence and in the volume of business activity.

The absence of a demand for new capital equipment may not at once cause marked inactivity in the constructional trades, for there are current contracts to be completed. But the knowledge that new orders are not being given is a good reason why merchants and manufacturers in other trades should anticipate a decline in the consuming power of these producing groups and should consequently limit their current output of the goods on which the work-people and other parties in those groups commonly expend their earnings. Entrepreneurs who supply boots for the home market cannot long maintain their normal activity when unemployment is increasing steadily in the engineering, shipbuilding, and iron and steel trades.

This tendency to a fall in the current output of producers generally is reinforced by the declining faith in the future of markets due to the earlier recognition of maladjustments of productive capacity. It is likely to be reinforced further by the fact that, as the business atmosphere changes, forecasts are becoming tinged by a growing error of pessimism, which still further limits the willingness of entrepreneurs to assume the risks of producing in anticipation of demand. In this way, the declining output of each entrepreneur, by reducing the consuming power of the group he controls, narrows the markets for the products of others; the inability of the markets to absorb the output of goods further lessens confidence; and lessened confidence, acting through a decline in business orders, shows itself in a further decline in current output.

To this set of influences, acting on and through the anticipations of business men—acting, as it were, through a distorting medium—must be added another set, arising from the imperfect operation of the monetary system. The essence of the matter lies in the consideration that failing confidence causes a severe contraction in the volume of effective purchasing power; that this contraction accentuates the fall in prices; and that the fall in prices reduces still further the willingness of the chain of entrepreneurs (manufacturers, merchants, and retailers) in each industry to assume the risks of producing in anticipation of demand. It is, perhaps, worth while to consider this train of consequences a little more fully, though, in doing so, we shall be repeating in inverse order the monetary changes occurring in the upward phase of the cycle.

In the first place, when confidence passes into apprehension, business men naturally endeavour to fortify their financial position, whether it be to meet prospective demands from their creditors or with the object of having funds readily available in order to pick up later the exceptional bargains which are certain to appear. In either case, they increase the reserve of money which they ordinarily hold against contingencies and by so doing reduce the quantity in actual circulation available for the purchase of goods.

Further, the realization of lower prospective yields on capital plant cannot fail to discourage the investor, whether he be the business man who is expanding his undertaking out of profits, or the

party who buys public issues of securities. Investment, therefore, is checked, though saving may proceed at a rate not much less than before. In the typical case, those who save will accumulate idle balances at their bankers. Just as they might hoard stocks of bank notes which they receive from other people, so they hoard bank balances transferred to them from the balances of other account-holders. As aggregate banking deposits are unaffected by this particular process, bankers have no more to lend and consequently invest no more than before. But as a larger part than usual of their deposits is idle, fewer cheques are drawn for the purchase, either of new securities or of consumable goods, and the volume of currency in active circulation is still further reduced. That such an effect actually does occur is made tolerably certain by the stationary or declining volume of bank deposits, the reduction in the volume of public issues of securities, a marked contraction in the figures of our own Clearing House returns, and the result of American investigations, which show that at such times there is a definite fall in the average velocity of circulation of deposit currency. Add to this the marked restriction in merchants' orders and consequently in the implicit promises to pay on which they are based, and we end the first stage of the argument with the conclusion that there is a marked contraction in the volume of effective purchasing power.

The effect of changes in the volume of purchasing power has already been dealt with at some length

in pages 42-47. Without considering further, therefore, the mechanism of the process, we may take for granted the persistent fall in prices which experience shows to occur, and pass on to examine its effect on the willingness of entrepreneurs to assume the risks of producing in anticipation of demand. It should be noticed that as the term " entrepreneur " is used here (*cf.* pages 19-20) to include manufacturers, merchants, and retailers, the change in the willingness to bear the risks of production may, in accordance with business thought and language, be looked at in two aspects: in the one, as a change in the will to produce of the entrepreneur regarded primarily as a manufacturer or employer; in the other, as a change in the will to buy of the entrepreneur' regarded primarily as a merchant or retailer.

As in the period of increasing business activity rising prices in effect give a bounty to the employer, so in the phase of declining activity falling prices act in effect as a tax; for while the price of his finished product continues to fall, the prices of the elements of which that product is composed do not fall in a corresponding measure. The values of raw materials may fall fast; but wage rates will usually decline slowly and irregularly, and the rates of interest payable on capital recently borrowed may remain long at a high level. As in the former period, therefore, the bounty stimulated the employer into increasing activity and contributed to the growth of an error of optimism, so in this later period, the tax contributes to the growth of an

error of pessimism and strengthens the influences which are already reducing current output.

The effect of declining prices is seen even more clearly in its second aspect. The power to buy, both of the ultimate consumer and the business man, is already reduced by the decline in the volume of output and consequently of earnings; and the will of the investor to buy capital goods, i.e., to invest, is reduced by his lack of confidence in the prospects of business. Persistently declining prices may have some effect in increasing the unwillingness to buy of the ultimate consumer; the incidents in the course of growth of the present exceptional depression show that he will try to postpone buying when prices are what he regards as unreasonably high. But it seems most improbable that in more ordinary circumstances falling retail prices will appreciably alter the proportion of his current income which he spends as it accrues. Whether or no this is true, it is clear enough that persistently declining general prices have a very powerful influence on the will to buy of the entrepreneur. Ship-owners will postpone contracts for new vessels, merchants will give fewer orders to manufacturers, retailers will buy even more than usually "from hand to mouth," if they anticipate a further fall in blast-furnace men's wages, in the value of raw cotton, or even in railway rates. Hence the paradox (easily enough explained, it is true) that a rise in the price of raw wools may, as it is now going, act as an incentive to the purchase of yarns at home and abroad; and that markets increasingly adverse to buyers

are necessary to develop to its full strength the will to buy of business men.

In this way failing confidence works out its double train of events: on the one hand, by prejudicing the judgments of the entrepreneur, it unduly discourages output and hence effective demand; on the other, by emphasizing the fall in prices, it works on and through the mind of the entrepreneur to reinforce these consequences. The two-fold train of effects, acting and reacting upon one another and upon their source, work cumulatively to depress business activity. The immense, complicated organization gradually slows down. Throughout that area in which modern forms of organization are most developed, employers, faced by contracting markets, are compelled to reduce the working hours of their plant; merchants and retailers, finding the values of goods melting away with the mere passage of time, postpone their purchases; many tens of thousands of work-people, discharged from the constructional and other trades, suffer a gradual deterioration in industrial capacity, while their demands for some simple and quickly-working remedy threaten the security of the State.

The ultimate causes of declining activity may be hidden away among those which generated the preceding boom, but their later manifestations in failing confidence, accompanied by falling output and prices, cannot escape observation; and their cumulative influence seems so powerful that explanation is required not so much of the continued growth of depression as of its ultimate limitation.

It may indeed fairly be asked why declining activity should not proceed far beyond the relatively moderate limit of its ordinary course; why it should not continue to develop until the larger part of our resources were out of action and unwilling idleness passed into starvation and revolution. Such a development is no doubt limited by the international setting of the industrial and commercial organization in which these influences are working most strongly, as well as by a home environment of agriculture and a multitude of small trades and handicrafts which are little affected by cyclical movements. It is limited further by forces analagous to those which confine the motions of a pendulum. For the main causes of recovery are probably to be found in the operation of the influences themselves: in their tendency, during periods of rising activity and periods of declining activity alike, to develop conditions which at first weaken their impulse, then reverse the direction of their operation, and finally enable them to generate a following opposite phase of the cycle.

In arriving again at the period of depression the argument has completed its course. As it has dealt with the special characteristics of no individual cycle, it has given no account of the exceptional features of the boom which culminated in the spring of 1920 and led to the present condition of abnormally severe depression. Its object has been limited to that of describing what seem to be the outstanding features common to business cycles generally, with the view especially of distinguishing the principal

causes in operation during the course of the movement. Lest the main lines of the argument should have been obscured by the side issues into which it has inevitably been led, it may be as well to re-state them briefly in a final summary.

Summary. We have, in the first place, as a consequence of the nature of modern industrial and commercial organization, certain special conditions in which the cyclical movement runs its course.

Let us begin with the elementary fact that the control over social resources is assigned to a group of entrepreneurs who regulate the activity of these resources in accordance with their own judgment and at their own risk. It is, therefore, in the mind of the entrepreneur and in the influences arising from his general circumstances and working upon it that we may reasonably expect to find the key to these rhythmical changes in business activity.

Among the more important of these circumstances is the condition of mutual interdependence among individual producers. The output of each producing group, constituting as it does the earnings of that group, constitutes also the consuming power of the group for the output of all others. Hence the total output of all the producing groups within the area of exchange constitutes the total power to buy; and any rise or fall in the business activity of the whole is a good reason for a rise or fall, in varying degree, in the activity of the individual groups of which it is composed.

Pass to further conditions. Inasmuch as modern methods of production take time and usually involve

the construction of slowly-made and very durable capital plant, resources must always be set in motion in anticipation of demand. The entrepreneur, whether he be the manufacturer who actually makes or the merchant who gives orders to make, must base his current activities not on known facts but on estimates of the future condition of his markets. And these forecasts are more difficult, and therefore more readily infected by a general error, when they are concerned with the construction of capital equipment and the very distant markets in which it is intended that its products shall be sold.

Further, the entrepreneur, regarded now as a middleman operating between two sets of prices, regulates the activity and direction of the resources he controls, not in direct accordance with social needs but in accordance with price. Hence arbitrary and irregular changes in price indices, due to the imperfect operation of the monetary system, inevitably mislead him (in his function as society's agent for the adjustment of resources to needs) and so cause or emphasize a maladjustment in many markets of output to demand. The recent history of the rupee and the overstocking of Indian markets illustrates one of the many ways in which such monetary disturbances express themselves.

These conditions, taken by themselves, seem inadequate to explain the existence of any marked rhythm in business activity. Disturbances originating in the monetary system, in harvest variations, or in changes in the profitability of particular

industries would, no doubt, be propagated, in some degree cumulatively, throughout the whole system. They would lead, it seems, to fortuitous variations in general business activity. But so long as manufacturers, merchants, and investors regulated their activities by forecasts based on rational judgments, it seems very doubtful whether such variations would be great. It must, however, be admitted that there is no sufficient ground for treating this view as a firm conclusion. It must be largely a matter of individual opinion in what degree the fortuitous impulses to which society is exposed would be developed by these conditions of modern industrial organization into periodical oscillations in general business activity.

What does seem certain, however, is that such rhythmical fluctuations as do occur are strongly reinforced when there is added to these conditions the influence exerted by changes in the level of business confidence: changes which lead to the cumulative growth of an error of optimism or pessimism in business judgments, which in periods of rising general activity unduly stimulates enterprise and in times of declining activity unduly depresses it. The error grows cumulatively, it was argued, partly as a result of our innate tendency to exaggerate success or failure, partly by mutual infection from the general business atmosphere. Its effects are two-fold: it acts directly on the estimates made by manufacturers and merchants of the future conditions of markets; and it acts indirectly on those estimates by its influence on the supply of

money and therefore on the movement of prices. The one effect reinforces the other. Together they cause these estimates to be unduly favourable or unduly unfavourable—and current business activity, consequently, unduly expanded or unduly restrained.

Inasmuch as optimism or pessimism naturally has greater influence on business judgments the less certain the basis on which those judgments rest, it is only to be expected that this influence should be most marked, and maladjustment of resources consequently most evident, in the output of new capital plant designed to produce goods for very far-ahead and uncertain markets. This inference is in harmony with the facts. The dominant characteristic of the whole cycle seems to lie in the exceptional fluctuation in the activity of the constructional industries. The upward phase of the cycle is generally marked by an unusually rapid creation of new capital plant accompanied by exceptional business activity and an undue expansion of credit—an abnormal growth encouraged by excessive confidence. That phase may be expected to end at about the time when the bulk of the new capital equipment comes into operation. The cause of its termination may lie perhaps in the sheer inability of society to maintain so rapid a rate of investment; more probably in the realization that the yield of the new equipment is likely to fall far short of the extravagant anticipations of those responsible for its creation; or finally in the inevitable reaction of the monetary system to the exceptional strain imposed on it. One or all of these

causes check the confidence in which the whole upward movement is based and compel general recognition of the dangerous conditions which have been developed. There is an interval of keen apprehension accompanied by rapid re-adjustments and a contraction of outstanding commitments ; and then follows a period of declining confidence marked by a train of cumulative influences similar in nature but opposite in effect to those at work during the upward phase of the cycle.

It may be admitted at once that this summary is too simple and too dogmatic. Little has been proved, much has been conjectured. At best the argument may be described as a set of inferences from general economic theory which are in tolerable agreement with the facts as we imperfectly know them. Its general trend is to the effect that modern forms of business organization carry with them conditions which are favourable to the growth of cumulative changes in general business activity ; but that the impulses mainly responsible for the wide sweep and rhythmical character of these changes arise from variations in the level of business confidence.

CHAPTER IX

SOME SOCIAL ASPECTS OF MODERN INDUSTRIAL ORGANIZATION

HAD this brief account of the operation of the Trade Cycle been a full and true tale of the many chains of cause and effect of which the movement is composed, it would still have left many questions unanswered. To describe the mechanism of the cycle is to deal with only one of its aspects. Some estimate is required of its comparative social significance. Some sort of answer should be found to such questions as these: first, are the effects on human well-being of these alternations of business activity so serious as to condemn our industrial system; and second, whatever their importance, can they be reduced without a radical change in our present methods of industrial organization?

In the opinion of many the answer to the first question is a simple one: with or without trade cycles the system is condemned by the social conditions which it has produced. In the opinion of others the system, with all its defects, is a form of organization which contains greater promise of universal material comfort than any other experi-

ment which has preceded it. When opinion is formed on widely different conceptions of the nature of what is socially desirable, and when moreover it is inevitably strongly coloured by personal circumstances, the scope for effective argument must be a limited one. Nevertheless if we omit such highly debatable questions as the measure of general acquiescence attainable under this and alternative forms of organization and limit the discussion to more strictly economic considerations, it may be worth while to note some of the more obvious and less disputable of the results attained under the present system, arranging these results in terms : first, of the amount of wealth annually produced ; second, of the mode of division of this wealth in the form of personal incomes ; and, finally, of the irregularities in these incomes due to unemployment arising from trade cycles.

Let it be noticed first that in this system the part which each plays in production is not assigned to him by the decision of any central authority, or fixed unalterably at his birth by status. Each, within the limits imposed by his character, his understanding and his general circumstances, contracts to contribute to production some particular service, and draws in exchange whatever may be the market value of that contribution. The condition is obvious, but it is still noteworthy. In his *Economic Development of France and Germany* Dr. Clapham points out that general free entry into trades existed nowhere until 1808 ; while in Würtemberg thirty years later businesses of every kind had to be

sanctioned by the local authorities. And far sharper restrictions on industrial liberty could be found by going farther afield in time and place. The significance of the contrast is the evidence it gives of the extent to which modern organization relies on individual initiative, on freedom of enterprise. Indeed it seems to be mainly from this essential characteristic that the strength and weakness of the system alike arise.

The freedom which has enabled the units of the organization to arrange themselves in accordance, as it were, with their inherent tendencies has enlisted in the service of production many of the strongest impulses, good and bad, of human nature. Ambition and ability are drawn into business uses in response to the attractions offered by the private control of resources and the opportunities for leadership held out by the operation of a rough process of natural selection ; and this invigorating supply of new energies goes far to ensure the continuous experiments in organization and the endless readaptation of methods on which national industrial leadership is dependent. This method of independent industrial adventure often leads no doubt to an extravagant multiplication of individual undertakings ; but, in contrast for example to State control, it enlists the strongest motives of self-interest to ensure the economical employment by each entrepreneur of the resources employed in his particular undertaking. If the system is to be condemned, it is not for any indifference to the problem of maximizing output, but rather for its

tendency to concentrate the powers of the community too exclusively on matters of material welfare. Probably at no other time has so large a part of the highest faculties of the people and so large a part of the energies of the State been so greatly preoccupied with the organization of production.

It is only to be expected that a system engaging such strong impulses and so large a fraction of the total energies of the community should have been harsh in its operation and should have attained great natural strength. No previous age has invented so powerful a form of organization for meeting material needs. The history of the past century shows clearly how roughly it has handled its human material; but it shows also that during that period it was rapidly improving the purely material welfare of rich and poor alike. "If the nineteenth century had done nothing else," writes Dr. Clapham, "it would deserve credit for having first reduced and then, it may fairly be said, removed the age-long dread of famine from the peasants and people of Western Europe." But it has done much more, as he later goes on to show. What it has done in this country is partly shown by figures prepared by Dr. Bowley, who estimated that during the last seventy years of the century the average real wages of adult males increased in the proportion of 45 : 100.

The freedom of initiative which has given the system its great productive strength has obviously given scope also for the growth of great inequalities of wealth. It has enabled some men to acquire large incomes by methods which have injured their

fellows ; but it has enabled far more so to organize resources as to increase the incomes both of themselves and of the community. We must at least avoid the error of assuming that a man ordinarily becomes rich only at the cost of others : we must admit that Henry Ford has not abstracted his wealth from others, but created it and much more besides by effecting the industrial equivalent of making two blades of grass grow where only one grew before.

It is a matter for debate whether it is just or unjust, expedient or inexpedient, that those whose abilities and special opportunities enable them to organize resources more efficiently than others should be allowed to retain a large part of the new wealth they create. The answer depends in some measure upon the manner in which their large incomes are expended. In part they are dissipated in extravagant living : a use which may be understood if not forgiven. It must be counted further against that mode of expenditure that it quickens the sense of division between rich and poor in a degree out of all proportion to the scale on which it is practised. In part they are spent in ways which enable a small minority to experiment in the art of living : to discover the modes of life and conduct to which modern civilization must point in any attempt to find its own justification. In part these large incomes are saved ; and it is of importance to notice that it has been through the agency of unequal incomes that we have mainly provided ourselves with the immense accumulation

of capital which has been one of the principal influences in maintaining English wages above the Continental level.

If inequalities of income arose only from differences in the ability, energy and thrift of those who contribute to production, it would be difficult to condemn them on grounds of expediency or perhaps even of justice. But, whatever their source, they tend to perpetuate themselves by the practice of freedom of bequest ; a practice as difficult to justify as to remove. For the inheritance of wealth in excess of a low but variable limit is hardly likely to be of any real benefit to the heir. At the same time the privilege it carries with it accentuates inequalities of opportunity, interferes with the right selection of industrial leaders, and so allows social resources often to pass under the control of second-rate ability.

Conspicuous as these inequalities are, it is as well to remember that an equal division of the annual output would not increase, but actually reduce, the incomes of many skilled workpeople. Consider the estimate of Dr. Bowley that if we take our total national income in 1911, deduct from it the expenses of government and the amount of our annual home investment, and divide the remainder equally among the community, the average rate and tax-free income of each family would be about £160 per annum. Moreover we may not assume that the inequalities are becoming more accentuated. On this point, Dr. Marshall, writing in 1907, in his *Principles*, expresses the opinion that "middle-

class incomes are increasing faster than those of the rich ; that the earnings of artisans are increasing faster than those of the professional classes, and that the wages of healthy and vigorous unskilled labourers are increasing faster even than those of the average artisan."

Finally we have the condition with which we are most immediately concerned: the condition that the operation of a modern industrial system based on free enterprise gives rise to periods of rapid expansion of new instruments of production accompanied by a tropical growth of business error and followed by periods of depression in which the outstanding evil is unemployment: in other words, an extreme irregularity in the incomes of a part of the wage-earning classes. The injury to human well-being arising in this way from business cycles cannot in fairness be judged by present conditions which are so greatly aggravated by the consequences of war on an unparalleled scale; it must be estimated from the experience of earlier cycles. Some material for such an estimate is found in the Trade Union unemployment percentages (twelve-monthly averages) quoted by Sir Wm. Beveridge in his *Unemployment*. These figures show that during the twenty years ended 1907 the annual figure for all reporting Unions varied from 2 per cent. to 7·7 per cent., the average for the whole period being $4\frac{1}{2}$ per cent. These figures take no account of short time, of the importance of which we know little beyond the fact that the number of workpeople claiming State benefit on account of "systematic short

time " was (in February, 1922), about one-eighth of the total number in receipt of insurance benefit from the State. And they may not, as Sir William expressly warns us, be taken as a measure of the absolute amount of unemployment throughout the country. At the same time there seems no reason to suppose that they are an understatement rather than an overstatement of that amount. The Trade Union percentages are however much more truly representative of the volume of full-time unemployment in particular industries. If therefore we take the corresponding figures for the engineering, shipbuilding and metal trades, industries which are especially subject to the influence of cyclical fluctuations, we have the effects of these influences at their worst. In this group of trades the annual figure varied from 2.2 per cent. to 11.4 per cent., the average for the whole period being $5\frac{1}{2}$ per cent. The trade cycle cannot be made responsible for the whole of this average percentage ; other causes also contributed ; but the wide variation in the annual figure between boom and depression shows that cyclical influences form a very important, if not the most important, single cause of unemployment.

What these figures mean in terms of human suffering and of deterioration in industrial capacity must be left to individual judgment to determine. Objectively they state that, during a period of twenty years in which two trade cycles ran their course, a group of trades especially subject to the effects of cyclical fluctuations maintained in employment (apart from any short time worked) an

average of 94 per cent. of their members. The question whether this figure indicates success or failure must be judged with reference to the magnitude of the problem of industrial organization which is involved. It should surely be estimated not by reference to ideal conditions of organization, but to those conditions which it is within human power to establish; that is with practicable alternatives. Unemployment did not originate with modern industrial conditions, though it became more apparent. "There is no good cause," wrote Dr. Marshall in 1907, "for thinking that the mediæval artisan had constant employment. And the most persistently inconstant employment now to be found in Europe is in those non-agricultural industries of the West which are most nearly mediæval in their methods, and in those industries of Eastern and Southern Europe in which mediæval traditions are strongest."

The problem which the industrial system of the United Kingdom has to solve, even when it is confined to its strictly economic issues, is not a small one.

On what principle should it organize twenty millions of workers, varying widely in ideals and capacities, so that they will be highly productive and at the same time reasonably content? how is high collective efficiency to be reconciled with personal liberty?

On what principle is its total output to be divided so that energy and thrift are stimulated without opportunity being given for any marked inequality in incomes?

How is the organization to readapt itself continuously to changing conditions at home and abroad without creating temporary unemployment with its accompanying irregularity in personal incomes?

It is only fair to take account of these much underestimated difficulties when attempting to form any judgment on the original question: whether our industrial system is condemned by its tendency to produce cyclical fluctuations in employment.

Under our present system, human energies have until recently been directed mainly to the solution of the first part of the problem: the maximizing of production. Its economic result has been to raise the average standard of material comfort above that of any previous age.

In so doing it has permitted the growth of very unequal incomes. The chief evil of these inequalities of income, it seems fair to say, lies in the inequalities of opportunity created and perpetuated by a large measure of freedom of bequest. They are conspicuous and important; but an equal division of the total available income would leave many artisans poorer than they are now.

Finally it has failed to eliminate the sources of unemployment, though the scale on which this occurred in pre-war days was probably much smaller than in India and in non-industrialized parts of Europe. The evils of unemployment, in so far as they are shown in irregularities of income, have been partly met in recent years by systems of

insurance ; but within their range they are still clearly disastrous.

It may be that an over-nice sense of human equality—a resentment of the relation of master and man—may prevent the system from recovering its old measure of efficiency. But its historical record does not seem so bad, or its present possibilities so limited, that it is not worth while for all the parties who compose it to co-operate in re-establishing its full productive strength, in order to escape a heavy decline in the general standard of living and to provide the means by which its organization may gradually be readjusted to more democratic methods of control. In that margin between effort actually put forth and effort which could be put forth without unreasonable strain lies a source of wealth amply sufficient to eliminate poverty.

The more fully the wealth-producing power of our existing system is admitted, the less excusable seems the delay in finding an effective remedy for the destruction of human well-being due to inconstancy of employment. It is not suggested that the remedy is easy to find. We are concerned here not with the application of palliatives, but with the restraint of causes. If the account of the trade cycle given in the preceding pages is a true one, the remedy for the inconstancy of employment which it produces must lie, it would seem, in modifications of the fundamental conditions of modern organization ; of the active influences generating the cycle ; or of the conditions during the period of depression when unemployment is at its maximum.

Of the conditions of modern organization which are capable of modification, the one on which opinion naturally fastens is that of the control of social resources by independent entrepreneurs. Is it then possible, by substituting some form of collective control, to eliminate the influence of the cyclical movement? The issues are too great to discuss here; all that can be done is to offer two comments. In the first place, it seems safe to say that such a method of treatment cannot be employed to effect a rapid cure. *A priori* reasoning does not carry us far on the road to discovering new and better methods of reconciling personal freedom with collective efficiency. Any alternative method of control must be experimental; it will need time to develop its special trained faculties and tradition, and experience to determine the directions in which it may safely be extended. With an immense population, whose standard of living, still low and precarious, is dependent on a very high level of collective efficiency, we cannot afford to accept chances which may greatly reduce productivity; the risks of rapid change are too great to be taken.

But supposing that the future changes in our industrial system take the form of such a transfer of control and that the new system can maintain the level of productivity, would it be able to eliminate this special cause of unemployment? It seems that the great volume of our foreign trade would still expose us to marked fluctuations in general business activity so long as the industries of foreign countries continued to be subject to cyclical move-

ments. Then, as now, we should be powerless to control a financial collapse in Japan or a period of business depression in the United States. Our workpeople might still remain "in employment," but nominal employment coupled with actual idleness would not be widely different from actual unemployment coupled with national relief. The evil might be reduced, but we cannot count on its being eliminated.

A second possibility of lessening the intensity of the trade cycle lies in modifying the influences actively working within it. These influences, it was argued, express themselves mainly in extreme changes in the level of confidence, reinforced by changes in the general level of prices. If, during the upward phase of the cycle, this excessive growth of confidence is to be confined within more narrow limits, it would seem that two conditions are necessary. Business men must be more fully aware of the dangerous conditions which are maturing during the course of the boom; and, further, it must be commercially profitable for them to curtail their more speculative operations, in particular the expansion of their industrial equipment, in response to their fuller recognition of these approaching dangers.

This second condition is not stated for the sake of formal completeness; it has considerable practical significance. During the period of rising business activity when many industries are exceptionally profitable, and their plant in consequence is being rapidly expanded, many business men may be fully

aware that the expansion is proceeding too far. Shipowners and cotton-spinners may know that when the projected new ships and new spindles come into effective operation freight rates and yarn prices will fall to an unprofitable level. But, even with that knowledge, it may still be worth their while to continue to extend their own undertakings. For they may know that they will be able for a year or two to earn dividends so high as to compensate them for the low returns during the following depression ; and each will certainly be aware that, whether or no he orders new ships or sets up new spindles, his competitors at home and abroad will not refrain from multiplying their plant and subsequently spoiling the market for all.

These considerations seem to show that, even with a full understanding of the situation, it is to the interest of individual business men in some industries to participate in an excessive expansion of its capital ; but the condition can hardly be regarded as representative. For in periods when profits are easily made, the entry of inexperienced men into business and the action of the more reckless entrepreneurs lead to an unhealthy expansion of activity. Many unsound undertakings, often with the aid of the company promoter, come into being ; many unduly risky ventures are undertaken ; much speculative buying takes place. And the mere fact that, in the hard times that follow, many of these undertakings fail ; many ventures lead to acute financial difficulties ; and many speculators and merchants are caught with large unsaleable stocks,

shows that those responsible for these operations were not acting in their own interests ; and that a closer understanding on their part of the conditions of the time would have checked in part the speculative expansion of business.

It may be said that full warning of approaching danger is given by the trade papers. And that perhaps is true. The difficulty, however, seems to be not so much in providing information for the seasoned business men who read these papers as in creating an effective realization of approaching danger in the minds of the more inexperienced and reckless members of the business community. Their excessive confidence in the business outlook is clearly not susceptible to any simple remedy ; but possibly federations of employers might take more effective action in propagating enlightened opinion and so forcing recognition more fully upon business men in their industries.

A mode of treatment likely to be more immediately effective would seem to be one which aimed at resuscitating the growth of optimism by reducing the artificial stimulus to business arising from the condition that in periods of boom the price of the entrepreneur's finished product rises more rapidly than the prices of the principal constituents of which that product is composed (*cf.* pages 48-49). There are evidently two ways in which this stimulus might be reduced.

The one method would be to endeavour to effect a more rapid readjustment of wage and interest rates to the varying profitability of business. If

it were possible to arrange that these rates rose faster than they actually do in times of rising prices and fell more rapidly than they actually do in times of falling prices, this closer adjustment would lessen the "bounty" which the employer receives during the one period and also the "tax" imposed on him during the latter. And this could hardly fail to restrict the extravagant expansion of business during the boom and the severe contraction during the following depression.

The second method is one which aims at restricting the rise in prices. During the upward phase of the cycle many sources contribute to the expansion in the volume of effective purchasing power (*cf.* pages 39-40); but much the most important part of the total supply is under the direct control of the banks. It is commonly held that the slowly perfecting policy of the English banking system has done much to lessen the intensity of the course of business cycles in this country. It would seem that the development of this policy might be carried further and that collective action by the banks in limiting still more closely the expansion of their loans during periods of rising business activity might confine expansion of purchasing power within more moderate limits, thereby restricting the rise of prices, the growth of excessive business confidence and consequently the tendency to business error. It is clear that in the face of a strong business demand for loans to finance a growing volume of business such a policy might be very difficult to enforce. But the social importance of this demand is easily over-estimated. For

an expansion in bank loans cannot increase the quantity of real resources available for production ; it can only increase the quantity of *control over resources* ; it can only supply business men with increased quantities of money, wherewith they compete for the available supplies of materials and so force up their prices.

It has already been noticed or implied that in the interval of apprehension which follows the boom the policy of the banks is of great importance ; that the English banking system has in recent cycles done much to prevent crisis from degenerating into panic ; and that by so doing it has moderated the severe contraction of business and widespread unemployment which mark the following condition of depression. As the preceding discussion has suggested, the principal remedy for this condition is to be looked for in methods of restraining the immoderate expansion of business in which the causes of depression are generated. But there are other well-known methods of dealing with the situation which should be noticed. There is the plan by which the State, municipalities and other public bodies should deliberately transfer from busy to dull times a part of their ordinary expenditure on such things as the construction of buildings, the renewal of stores and the repair of roads. There is the plan by which public authorities undertake schemes of emergency work, such as those which, early in 1922, are providing employment for a little under one per cent. of the wage-earning population. And there is the plan by which State aid is given to

selected undertakings in the form of facilities for obtaining capital. In periods of depression on the scale of those to which we have previously been accustomed, such schemes might go a long way towards reducing the numbers of the unemployed. It seems hardly appropriate, however, to discuss them further here; partly because they are fully treated in current literature; partly because they are of the nature of palliatives and can hardly be said to deal with the causes of unemployment which originate in the trade cycle.

A more interesting question is that of the opportunities which may arise for the effective application of remedies. Rash as it is to prophesy, it is merely foolish to refuse to take stock of the possibilities of the near future. No one supposes that the business depression in this country will last for ever; and memories of 1919-20 remind us that marked trade activity is not inconsistent with the disturbed conditions inherited from war. But past experience can throw little light on the date of trade recovery when cyclical influences are so greatly complicated by arbitrary political and economic forces.

It is more profitable to speculate on the possibilities of an early revival in the United States where these abnormal disturbing influences are relatively less important; for although the foreign commerce of that country has grown greatly in recent years, it is still of quite minor importance in comparison with the immense volume of her domestic trade. Her potential productivity and hence the potential purchasing capacity of her markets are as

great as ever ; the temperament of her industrial leaders is presumably still as resilient ; and her currency is still based on an effective gold standard. Already there seems to be a stabilization, if not an upward tendency, of wholesale prices and an increase in the physical volume of business ; while her immense stocks of gold hold out possibilities of a great expansion of bank loans available at low rates to encourage the growth of confidence and the expansion of business operations. Nothing is certain, but it seems only reasonable to look to the United States as the country most likely in the near future to enter upon a period of growing trade activity and rising prices. And such a development it would seem could hardly fail to initiate a similar movement in this country.

Whether or no the initial stimulus comes to us from the United States—at that uncertain date when our trade begins to revive we shall have before us the prospect of a period of increasing activity, rising prices and expanding business confidence, and the knowledge that the more excessive this expansion the more severe will be the subsequent depression which it generates. There are two ways, it was noticed, in which the undue growth of optimism might be restrained.

The former, concerned with the closer adjustment of wage rates to trade conditions, is so difficult that little more can be said about it in any short space. But just as it is desirable that wage rates should fall more rapidly (though not further) than they ordinarily do in times of declining trade in order

that employers may not be too strongly discouraged in their efforts to maintain output, so it seems desirable that wage rates should rise more rapidly (though not further) in times of improving trade in order that business activity may not be excessively stimulated. A general admission of this principle might lead to some improvement in the wretched prospect of a long series of wage disputes during the next trade revival, a partial removal of one of the causes which make business at such times unduly easy and profitable, and a consequent modification in the intensity of the prospective boom.

The second suggestion was concerned with the adoption of a policy deliberately designed to restrain the rise in the general level of prices. The present possibilities of such a rise are considerable ; for the fiduciary issue of Treasury notes is more than £50 millions below the maximum fixed by Treasury ruling, and that sum evidently provides the means for a substantial expansion of bank loans and a corresponding rise in prices. Such a rise, it must be admitted, would not be without its advantages ; for by its general effect in relieving debtors at the expense of creditors it would lessen the real (though not of course the nominal) claims of holders of Government stocks and so greatly lighten the difficulties of State finance. That advantage is not a small one ; but it is partly set off by the accompanying drawback that the further prices rise—in other words, the further the value of the pound falls—the further recedes our prospect of returning to an effective gold standard at the pre-war parity.

When to these considerations are added those with which we are here primarily concerned, there seems to be a good case for deliberately restraining the rise in prices during the period of growing trade activity which sooner or later must come. During that period some rise in prices is probably both desirable and unavoidable. But a limitation imposed on the extent of their rise, either by a further Treasury ruling removing a part of the potential expansion of note issue or a collective banking policy designed to limit the expansion of bank loans, could hardly fail to remove part of the artificial stimulus to business which results from rising prices, thereby checking the excessive growth of business confidence and limiting both the extravagance of the boom and the intensity of its following period of depression.

